International Cookbook for Quinoa:

Tradition and innovation

Project management: Salomón Salcedo and Tania Santivañez.
Coordination and editing: José Luis Reyes and Melisa Aytekin.
Design: Mariana Young.
Photography: Claudio Guzmán.
Recipe photographs: Jonathan Astorga.
Food presentation for photographs: Aramark team.
Nutrition advisors: María José Coloma, Ryan Gorczycki and Shelly Johnston.
Collaborators: Daniela Marín and Byron Jara.

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-108057-3 (print)
E-ISBN 978-92-5-108058-0 (PDF)

© FAO, 2014

FAO encourages the use, reproduction and dissemination of material in this information product. Except where otherwise indicated, material may be copied, downloaded and printed for private study, research and teaching purposes, or for use in non-commercial products or services, provided that appropriate acknowledgement of FAO as the source and copyright holder is given and that FAO's endorsement of users' views, products or services is not implied in any way.

All requests for translation and adaptation rights, and for resale and other commercial use rights should be made via www.fao.org/contact-us/licence-request or addressed to copyright@fao.org.

FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org.

International Cookbook for Quinoa:

Tradition and innovation

Quinoa

a future sown thousands of years ago

Index

Acknowledgements ix

Prologue José Graziano da Silva x

Prologue Evo Morales Ayma xii

Prologue Nadine Heredia Alarcón xiv

Chefs Against Hunger xvii

Introduction xix

Quinoa and its uses xx

The nutrition and culinary basics of quinoa xxiv

RECIPES

STARTERS

Tuna with quinoa | Foundation for Development FAUTAPO (Bolivia) 3

Quinoa salad | Foundation for Development FAUTAPO (Bolivia) 5

Quinoa tabbouleh | Juliana López May (Argentina) 7

Stuffed tomatoes| Foundation for Development FAUTAPO (Bolivia) 9

Quinoa salad with avocado pebre | Carlo von Mühlenbrock (Chile) 11

Quinoa purée with potatoes | Community of Laguna San Martin (Ecuador) 13

Germinated seeds | Quique Dacosta (Spain) 15

Quinoa tamale with chicken | Mariluz Tiocona Condori, Asociación Wiñay Warmi (Peru) 17

Quinoa and pumpkin soup | Matías Palomo (Chile) 19

Quinoa empanadas with cheese | Magda Irene Flores Mamani, Asociación Wiñay Warmi (Peru) 21

Black quinoa, sweet potato, plantain and green leaf salad | Matthew Boland and Darwin Jose Torres (Aruba) 23

Quinoa pie | Magda Choque Vilca and farmers of the Humahuaca Gorge, Province of Jujuy (Argentina) 25

Tabbouleh with wild mushrooms, black garlic and baby aubergine | André Chiang (Singapore) 27

Quinoa and laksa leaf salad with goat cheese, wakame and red wine | Chris Salans (Indonesia) 29

Quinoa salad with red fruits | Joan Roca (Spain) 33

Quinoa salad with toasted cumin and lemon vinaigrette | Malika van Reenen (South Africa) 35

Quinoa salad with tuna and ginger | Takahiro Tozawa (Japan) 37

MAIN COURSES

Quinoa chilli | Foundation for Development FAUTAPO (Bolivia) 41
Quinoa soup with pork | Community of Laguna San Martin (Ecuador) 43
Quinoa tortilla | Joseph Brozovich (Bolivia) 45
Quinoa soup with diced beef | Community of Guadalupe (Ecuador) 47
White quinoa broth with lamb | Victoria Coila Zapana, Wiñay Warmi Association (Peru) 49
Quinoa and fish stew | Wiñay Warmi Association (Peru) 51
Quinoa burger | Martiniano Molina (Argentina) 53
Puñuchi (quinoa soup) | Promotion of Andean Development RURANDES (Peru) 55
Valencian paella with seafood and quinoa | Juan José Peralta (Bolivia) 57
Hot quinoa ceviche | Flavio Solorzano (Peru) 59
Scrambled eggs with quinoa | Alejandrina Mendoza (Argentina) 61
Stuffed mushrooms | Rubén Vega Soler (Ecuador) 63
Quinoa stew | Teresa Berta Cardozo, of the indigenous community of Ayllu Mama Kolla (Argentina) 65
Quinoa meatballs in sauce | Orfelinda Negrete (Peru) 67
Lentils with quinoa | Feria Libre Nueva Esperanza de Arica (Chile) 69
Quinoa coated sardines, served on sautéed black quinoa accompanied with chakalaka and fresh vegetables | Citrum Khumalo (South Africa) 71
Spicy minced pork and mushrooms with quinoa grilled in banana leaves | ML Sirichalerm Svasti/McDang (Thailand) 75
Stir fried quinoa with Thai style chicken satay and peanut sauce | Lorenzo Rosso (Thailand) 77
Pan fried rawas fillets with quinoa upma and kairi curry sauce | Rahul Akerkar (India) 81
Quinoa tabbouleh with chicken breast | Alfredo Oropeza (Mexico) 85
Crispy sole with quinoa and spicy fennel | Claude y Thomas Troisgros (Brazil) 87
Quinoa polenta with pork in tomato sauce | Adolfo Perret (Peru) 89
Cocoffinoa chicken | Débora Fadul (Guatemala) 91
Tah-Chin with chicken | Chef Pasha (Iran) 95
Quinoa and chickpea stuffed peppers with merquén | Maria José Coloma, Shelly Johnston and Ryan Gorczycki (US-Chile) 97
Quinoa macaroni and cheese, accompanied with chicken and sun-dried tomato | Rose Reisman (Canada) 99
Quinoa with roasted tomatoes, walnuts and olives | Jenna Beaugh (US) 101
Quinoa risotto with seasonal mushrooms | Mauro Colagreco (France) 105

DESSERTS AND DRINKS

Quinoa crispy bars | Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia) 107
Morocho de dulce with quinoa | Mauricio Armendaris (Ecuador) 109
Sweet quinoa kispiña | Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia) 111

Quinoa and apple pudding | Dolli Irigoyen (Argentina) 113
Quinoa sponge cake | Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia) 115
Lemon verbena quinoa tart with pomegranate sauce and quinoa wafer | Frank Villablanca (Chile) 117
Quinoa porridge | FAUTAPO Foundation (Bolivia) 119
Quinoa rocher | Enrico Crippa (Italy) 121
Quinoa dessert with fruit | Community of Laguna San Martín (Ecuador) 123
Quinoa with milk and guaviyu | Laura Rosano (Uruguay) 125
Quinoa biscuits | Irma Paca de Cano, Wiñay Warmi Association (Peru) 127
Quinoa and kaffir lime cake with crème fraîche and puffed quinoa | Morten Nielsen (Thailand) 129
Pasankalla quinoa pastries | Luz Marina Ortega, Wiñay Warmi Association (Peru) 131
Quinoa and apple porridge | Claus Meyer (Denmark) 133
Quinoa cake | Gloria Condori Yapo, Wiñay Warmi Association (Peru) 135
Apple crumble | Teresa Cutter (Australia) 137
Quinoa fritters (buñuelos)| Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia) 139
Quinoa pancakes | Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia) 141
Quinoa tawa tawa | FAUTAPO Foundation (Bolivia) 143
Quinoa bread rolls | Hulda Salomé Salas Quispe (Peru) 145
Juice of quinoa with apple and/or peach | Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia) 147
Quinoa with milk | Patricio Víctor Bermúdez, recipes from Lluta Valley (Chile) 149
Quinoa drink | Mariluz Ticona, Wiñay Warmi Association (Peru) 151
Quinoa chicha | Galo Villa (Ecuador) 153

Chefs 155

Communities 171

Glossary 175

Conversion tables 181

Nutritional value 185

Acknowledgements

This cookbook is the result of the active involvement of persons dedicated to the fight against hunger. We wish to express our gratitude:

To the chefs who used quinoa as a key ingredient of their innovative creations for this cookbook.

To the indigenous communities and individuals who have shared their recipes for the selection of traditional recipes, creations that have accompanied them for generations and that they are now making available to the world, in particular Magda Choque Vilca and Patricio Víctor Bermúdez who have eaten quinoa all their lives.

To the institutions that kindly shared their recipes for the traditional sections: the Autonomous National Institute of Agricultural Research (INIAP) of Ecuador; the Foundation for Development (FAUTAPO) and the Foundation for Promotion and Research of Andean Products (PROINPA) of Bolivia; the Wiñay Warmi Association and the Manuela Ramos Movement of Peru; and the Feria Libre Nueva Esperanza de Arica of Chile.

To nutritionists Ryan Gorczycki and Shelly Johnston, whose expertise helped to produce this cookbook, and to Mississippi State University and Duke University for making available the services of these experts.

To the professionals of ARAMARK who brought these recipes to life through their beautiful photographs.

To the representatives of the governments of Argentina, Bolivia, Chile, Colombia, Ecuador, France and Peru who made up the International Coordination Committee of the International Year of Quinoa.

To the personnel of FAO worldwide who supported the different stages of this publication.

To the Spanish Agency for International Development Cooperation (AECID) for supporting the production and printing of this cookbook.

FAO's mission is to achieve food security for all and to ensure that all persons have regular access to high-quality food that will enable them to lead active, healthy lives.

There are 842 million people in the world who are suffering from hunger. It is difficult to imagine such a number: one in every eight persons. Such a figure is beyond the understanding of most people, yet that is the number of men, women and children in the world who are faced with hunger every day.

We cannot just sit back and accept this as yet another statistic.

Instead, we must rise against this reality, join forces and fight.

This cookbook does not therefore celebrate a food: it recruits a new ally in the fight against hunger: quinoa.

As we see it, there can be no sustainable development in the world when millions of people suffer from hunger.

Thus, the United Nations General Assembly declared the year 2013 as the "International Year of Quinoa", at the initiative of the Bolivian Government "in recognition of ancestral practices of living in harmony with nature and preserving quinoa in its natural state as a food for present and future generations"

This book retrieves traditional recipes from all parts of the world. They are easy to prepare, inexpensive, healthy and nutritious. They highlight quinoa as a food crop that possesses essential amino acids, trace elements and vitamins for life.

Quinoa also has an extraordinary capacity of adaptation to different agroecological environments. Depending on the variety or ecotype, it can be grown in relatively humid areas, in highlands and lowlands, and can withstand both very high and very low temperatures.

Faced with the challenge of raising the production of quality food in a context of climate change, quinoa emerges as an option for those countries that are affected by food insecurity.

That is why FAO has published this cookbook as part of the International Year of Quinoa, with the support of Chefs Against Hunger.

Quinoa's richness resides not only in the grains of its coloured panicles. Its value also lies in the accumulated know-how of the Andean people, which has served to preserve its many varieties, to improve its yield and to develop a gastronomy centred on quinoa.

That is the true wealth we stand to gain from "a future sown thousands of years ago".

José Graziano da Silva
Director-General of FAO

As an essential feature of Andean culture and way of life, the indigenous populations cultivated, improved and preserved - using traditional practices and in harmony with nature - a grain of high nutritional value known in the Aymara language as Jiwara, Jupha or, today, as quinoa.

For centuries quinoa was found on the table of the most humble households. I remember, for example, that when I was a boy there was always quinoa in my home. Until recently it was in fact a food of the native Andeans - of those who could only feed themselves with what they grew with their own hands. I was particularly fond of a dish called phisara - which converted quinoa into soft fluffy cotton, sometimes seasoned with salt, cheese or sugar.

This golden grain - as it is now called, saved the lives of our grandparents, our fathers and mothers, preventing them from dying of hunger in times of drought.

I myself am an example of how quinoa can overcome poverty and make us strong.

From the quinoa that I was given as a child I found energy and health, despite the hardships.

Capitalism trades on the hunger of the people. Many foods are unaffordable for most people. The transnational corporations convert food into commodities that are quoted on the stock exchange. They create eating habits and products that earn them profits without paying attention to quality or to people's health. To make matters worse, many of these companies even control the provision of seeds and thereby assault the cultural heritage of local populations and of humanity.

Quinoa is an alternative for food security and food sovereignty because it is easy to grow, it adapts well to arid soils and because it requires little water and is resistant to pests and drought.

I can therefore well understand why the United Nations General Assembly declared 2013 as the International Year of Quinoa. We must conserve this golden grain - given to us by our indigenous populations, as an emblematic food for fighting hunger in the world. This cookbook presented today illustrates the infinity of possibilities that are offered by quinoa to satisfy the most demanding of tastes.

¡Kausachum quinua!
¡Jallalla quinua!
¡Viva la quinua!

Evo Morales Ayma
President of the Plurinational State of Bolivia
FAO Special Ambassador for the International Year of Quinoa

"In this cold land, I sow quinoa of a hundred colours,
of a hundred types, of mighty seed. Those hundred
colours are also my soul, my unmissable eyes"
José María Arguedas

Through this book our chefs, gastronomic ambassadors of the Andean diet and in particular of quinoa, join forces with sister countries, under the auspices of FAO to provide millions of homes with a collection of top nutritional value recipes that add enjoyment and taste to the fight against hunger and malnutrition.

The International Year of Quinoa gives us the opportunity to reassess the work of Andean women and the farming families of our Andes, their know how and agricultural traditions that have been passed down from generation to generation. Today those traditions merge with the determination to fight hunger with the help of a food recognized by the United Nations as one of the foods of the future.

Declaring 2013 as the International Year of Quinoa allows us to reappraise quinoa as a product with an ancient tradition, originating in the Lake Titicaca basin which conserves the greatest biological diversity, domesticated by the Andean people for five thousand years, and makes this golden grain universally available as a contribution to world food security.

As FAO Special Ambassador for the International Year of Quinoa, I wish to thank all those individuals and institutions that have contributed to this meeting of the past and the future, of knowledge and colours. Each and every one brings us closer to that promise of a world without hunger and in which well being is a reality.

Nadine Heredia Alarcón
First Lady of Peru
FAO Special Ambassador for the International Year of Quinoa 2013

Chefs Against Hunger

We all have something to contribute to the fight against hunger. From our respective areas of professional expertise and knowledge, each one of us can offer our time and creativity so that hunger is finally consigned to history.

Chefs Against Hunger is a campaign of the Hunger-Free Latin America and the Caribbean Initiative and FAO set up in 2008 with the participation of renowned international chefs, cooks and food critics, who are committed to improving the nutritional status of the region, with a particular focus on its most vulnerable inhabitants. They are professionals who seek to promote the foods of the region and to encourage their consumption through recipes that are delicious, healthy, nutritious, relatively inexpensive and simple to prepare.

The campaign has amongst its principal achievements the publication of five cookbooks. Three of these focused on typical Latin American foods, namely potato, legumes and maize, while the fourth centred on Chilean sea foods. This fifth cookbook for quinoa, produced in partnership with the Technical Secretariat of the International Year of Quinoa, represents a leap onto the global stage for this commitment of gourmet professionals against hunger.

The Hunger-Free Latin America and the Caribbean Initiative, which spawned Chefs Against Hunger, is a commitment of the countries of Latin America and the Caribbean to eradicate hunger by the year 2025. This regional endeavour involves not only governments, but also parliaments, international and regional organizations, universities, civil organizations, the private sector and society as a whole.

FAO's support to Chefs Against Hunger and to the Hunger-Free Latin America and the Caribbean Initiative has from the outset benefited from the collaboration of the Spanish Agency for International Development Cooperation (AECID).

Further information is available at *http://www.rlc.fao.org/en/proyectoiniciativa/chefs*

Introduction

Quinoa, the so-called golden grain, was safeguarded for thousands of years by the inhabitants of the Andean regions of Latin America and has only recently been discovered by the world. In its honour, the United Nations declared 2013 as the **International Year of Quinoa.**

In doing so, the UN paid tribute to the Andean indigenous peoples who have maintained, controlled, protected and preserved quinoa as a food for present and future generations thanks to their knowledge and traditional way of life in har**mony with nature.**

But not only this; the United Nations General Assembly also noted the nutritional characteristics of quinoa and its adaptability to different agroecological conditions, properties that, coupled with its low cost of production, make it a strong **partner in the fight against hunger and food insecurity**

The origin of this cookbook stems from that recognition by the United Nations.

Its purpose is to serve as a means of publicizing quinoa and its benefits beyond its area of origin, to promote its production and consumption throughout the world and thus to reach those countries that suffer most from food insecurity

With this in mind, FAO resorted to tradition and innovation. Tradition takes the form of everyday recipes of peoples and communities living in the quinoa producing regions of Latin America. The dishes have varied origins, some going back **many centuries, others only existing for a few generations.**

As for innovation, FAO used the Chefs Against Hunger campaign to contact dozens of chefs around the world and to invite them to present recipes that were inexpensive, healthy, nutritious, and simple to prepare and whose preparation was based on ingredients from their local region. Not an easy challenge The outcome was 37 recipes with ingredients from all over the world, exotic flavours and varied textures and aromas Evidence of the versatility of this grain, which can adapt to all cuisines

This publication combines both types of recipe, traditional and innovative, to **offer more than 60 different dishes.**

We hope that you will enjoy this cookbook, that you will venture into the wide selection of quinoa flavours and, if you are able, that you will share it with those who can most benefit from it, thereby helping to disseminate this future sown **thousands of years ago.**

Quinoa and its uses

Quinoa, whose scientific name is 'Chenopodium quinoa Willd" is a plant that has existed throughout the Andes for more than 7 000 years. It was an important food in the diet of pre-Columbian civilizations that were responsible for its breeding, conservation and distribution, and for its adaptation to different agroecological zones in the region. Because of its high nutritional value, indigenous peoples and researchers often refer to it as 'the golden grain of the Andes".

Many experts agree that quinoa originated in the area surrounding Lake Titicaca in Peru and Bolivia. Available historical evidence indicates that its domestication by the peoples of America could have occurred between the years 3 000 and 5 000 BC.

The word quinoa comes from the Quechua language and means "mother grain". At the time of the Incas this grain was considered a sacred food and was used for medicinal purposes.

When the Spanish arrived, quinoa was well developed and widely distributed within and beyond the Inca territory. However, during the conquest quinoa was replaced by cereals, despite being a staple food for the local population at the time, a situation that has only begun to change in recent decades.

The plant and its cultivation

Depending on sowing density, the quinoa plant can grow up to 1 to 3 metres. The seeds can germinate very rapidly, in fact only a few hours after exposure to moisture. The roots can reach depths of up to 30 centimetres. They are pivotal (growing vertically downwards), robust, deep and fairly ramified and fibrous, which makes them resistant to drought and gives them good stability.

The stem is cylindrical, with a diameter of 3 5 centimetres at the plant collar. Its thickness varies between 1 and 8 centimetres. Some varieties have many branches while others have only one main stem.

The leaves have a shape resembling the webbed feet of geese and are varied in colour, from green to red, with different tonalities. They can measure as much

as 15 centimetres in length and 12 centimetres in width. The leaves are covered with crystals (of calcium oxalate) which enable them to capture night moisture, to control excessive transpiration and to avoid overheating from sunlight

The flowers are very small, reaching a maximum size of 3 millimetres and with no petals. The fruits are round and slightly wider towards the centre

One of the prominent features of quinoa is its versatility as a crop that can adapt to different climatic and geographical conditions. Depending on the variety or genotype, quinoa can be grown in relatively humid areas, in highlands and lowlands and can withstand very high and very low temperatures. It is also a crop that uses water efficiently and tolerates very low levels of soil moisture.

Quinoa generally needs between 160 and 180 days after sowing before it can be harvested.

Main producers of quinoa

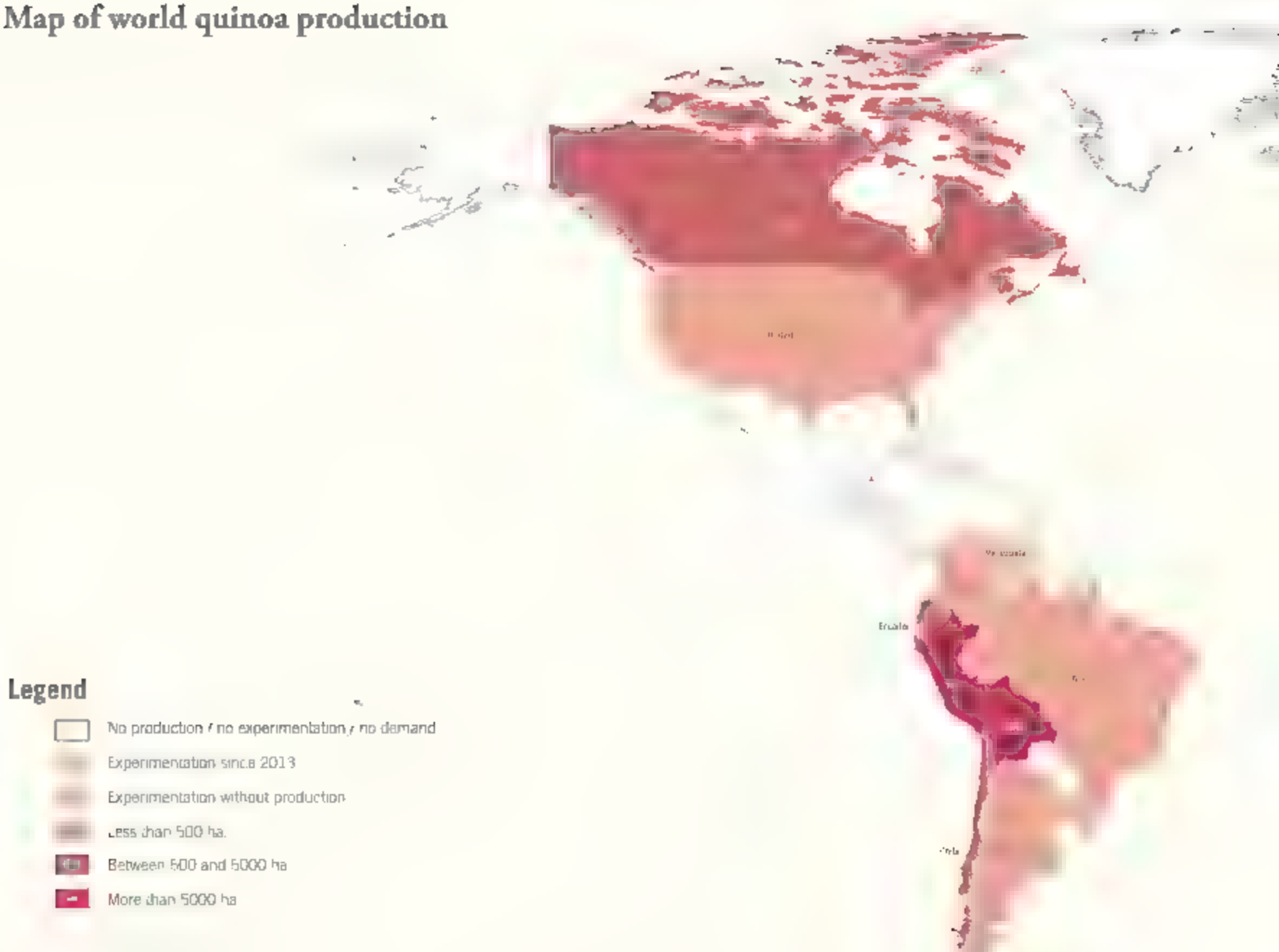
Quinoa is found in native form in all the Andean countries, existing from Colombia (Pasto) to southern Chile. This crop has been developed principally by small producers, generally under organic conditions which gives it special characteristics that are increasingly valued in international trade.

It is estimated that three countries account for more than 80% of global production. Bolivia, Peru and Ecuador. FAOSTAT reports that in 2011 Bolivia had 61 789 hectares sown with quinoa, equivalent to an output of 38 257 tonnes, while Peru had 35 461 hectares, which produced 41 168 tonnes. Ecuador had 1 277 sown hectares, producing 816 tonnes.

There has been a noticeable increase in quinoa production in recent years, especially in the countries that have traditionally been the main producers. According to FAOSTAT, output rose 60% in Bolivia during the period 2000 – 2011, 46% in Peru and 25% in Ecuador.

Quinoa cultivation has crossed continental boundaries. As the map of world quinoa production shows, there are countries outside the Andean region that are producing substantial quantities of quinoa. Moreover, there are data from countries in Asia, Africa and Europe that are working on an experimental basis with quinoa

Map of world quinoa production


Legend
No production / no experimentation / no demand
Experimentation since 2013
Experimentation without production
Less than 500 ha.
Between 500 and 5000 ha
More than 5000 ha

Source: *Didier Bazile (2013), CIRAD*

There are two reasons for the increase in quinoa consumption. On the one hand, rural-urban migration in the Andean countries has transferred to urban centres the habit of consuming quinoa, which is intrinsic to the identity of the rural populations of the production areas, who include quinoa in their diet as a historical legacy from their ancestors. On the other hand, the increase in quinoa consumption is the result of higher demand from the developed countries, such as the United States, Canada, Japan, France and Holland, where sections of the population seek healthy foods and have identified quinoa as being an excellent alternative, with its high quality standards and, especially, its organic production.

Other uses of quinoa

Apart from being a food, quinoa (stem, leaves and grain) has other uses. The whole plant can be used as green forage and the residues from harvesting can be used as animal feed.

The indigenous populations of the Andes have traditionally used quinoa leaves, stems and grains for medicinal purposes, attributing quinoa with properties related to healing wounds, reducing swelling, soothing pain from toothache and disinfecting the urinary tract. Quinoa has also been used for bone setting, in internal bleeding and as an insect repellent.

Research has also revealed a potential use of quinoa in the chemical, pharmaceutical and cosmetic industries. For example, quinoa starch has special potential for industrial use because of its small size in aerosol production, pulps, self-copy paper, dessert foods, excipients in the plastics industry, talcs and anti-offset powder. Also the saponins from the pericarp of bitter quinoa can be used as biopesticide, as has been successfully shown in Bolivia, and potentially in the preparation of detergents, toothpaste, shampoos and soaps.

The nutrition and culinary basics of quinoa

For some people, quinoa is a new and nutritious food recently available at their local supermarket or favourite restaurant as a substitute for many commonly eaten grains. While this may be true in many areas of the world, the native peoples of the Andes region of South America have been using quinoa for thousands of years as a part of their cuisine.

Before you discover the many traditional and gourmet recipes in this book, we would like to present some basic information on why quinoa is considered to have good nutrition, and tips for a few simple ways to prepare it at home.

Quinoa's nutrition profile

What makes quinoa nutritious is its high content of plant protein, fibre, unsaturated fats and minerals. It is also a good source of energy, providing about 222 calories per cup when cooked.

While quinoa is technically a seed, it is often called a pseudo cereal because it is eaten similarly to cereals such as maize, rice and wheat. In comparison with other

1 cup (185 g) of cooked quinoa

Protein	8.14 g
Dietary fibre	5.2 g
Iron	2.76 mg
Magnesium	118 mg
Zinc	2.02 mg

Source: *USDA, 2005*

plant foods, especially the major grains, quinoa stands out primarily because of its protein quality. It contains about eight grams of total protein per cup of cooked quinoa. To appreciate the relevance of this fact, we need to understand that proteins are made up of smaller compounds called amino acids. Eight are considered essential for both children and adults.

While most cereals and legumes are lacking in one or more of the essential amino acids to be considered a complete source of protein, quinoa contains an adequate balance of all eight.

In addition, quinoa is a good source of dietary fibre and polyunsaturated fats. One cup of cooked quinoa contains about five grams of dietary fibre and, when combined with vegetables in a meal, can achieve close to a third of the recommended daily intake of dietary fibre. Dietary fibre is the indigestible portion of plant foods and is important for good digestion and to prevent constipation.

Regarding the fats found in quinoa, over half are essential polyunsaturated fatty acids that maintain their high quality even after harvesting, because of quinoa's significant content of the antioxidant vitamin E.

Quinoa is also known as a good source of iron, magnesium and zinc among plant foods. Lack of iron is one of the most common nutritional deficiencies. Iron is important to good health because it helps to carry oxygen from the lungs to the rest of the body. One cup of cooked quinoa contains about 2.76 mg of iron.

In addition to its mineral content, quinoa is also a good source of B vitamins riboflavin and folic acid.

While quinoa is a good source of many nutrients, it should be consumed as part of a balanced diet to obtain good overall nutrition.

Tips for preparing and cooking quinoa

Quinoa is generally available in pre-packaged containers and in bulk bins in local markets and supermarkets. If buying quinoa from a bulk bin, make sure that the bins containing the quinoa are covered, and that the store has a good product turnover to ensure the quinoa is fresh. If you cannot find it in your local supermarket, look for it in natural food stores.

Store the quinoa grains in an airtight container so that it keeps for longer. Quinoa stored in the refrigerator will keep for three to six months.

When harvested, quinoa contains saponins on the outer layer of its seed. Quinoa saponins are not considered harmful, but they have a bitter taste. Most of the saponins are removed when quinoa is processed prior to being sold, but many people choose to rinse the seeds prior to cooking to remove any remaining bitterness from the saponins. One method is to place the seeds in a strainer and run cold water over the quinoa while gently rubbing the seeds with your hands.

To cook quinoa, add three parts of water for each part of quinoa to a saucepan. After the water begins to boil, reduce the heat to a simmer and cover. One cup of quinoa usually takes about 15 minutes to cook. When the cooking is complete, the quinoa grains turn translucent in colour. If you want the quinoa to have a nuttier flavour, you can try dry-toasting it in a pan over medium-low heat prior to cooking, stirring constantly for about five minutes.

Traditionally, quinoa is added to soups, or is ground into a flour to make beverages, porridge or bread. While it is possible to bake dough made of quinoa flour, this is usualy combined with other flours to produce a lighter texture.

STARTERS

Tuna with quinoa

Source: Foundation for Development FAUTAPO (Bolivia)

Ingredientes:

⅓ cup quinoa
1 can tuna in water
2 tbsp chopped parsley
Mayonnaise

Preparation:

- Wash the quinoa and cook in water.
- Place the cooked quinoa in a bowl and add the tuna, parsley and mayonnaise to taste
- Mix all the ingredients and serve with sliced bread or in tartlets

Tip:

Canned tuna is a rapid source of protein. It is important to include foods rich in protein in each meal to maintain body tissues

Quinoa salad

Source: Foundation for Development FAUTAPO

Ingredients:

1 cup quinoa
2 tbsp chives, finely chopped
1 tomato, chopped
½ cup cheese, d ced and/or grated
Lettuce leaves

Preparation:

- Cook the quinoa in three cups of water for 20 minutes
- When ready, let cool and mix in the chives and cheese
- Serve decorated with lettuce leaves and chopped tomato.

Quinoa tabbouleh

Chef Juliana López (Argentina)

Serves: **6**

Ingredients:

300 g quinoa

Pars ey leaves

Coriander (cilantro) leaves

M nt leaves

½ bunch spring onion

500 g tomatoes

2 lemons, juice

1 cup olive oil

Sa t

Pepper

Preparation:

- Rinse the quinoa to remove the bitter taste and cook it in abundant sa ted water until we cooked
- Cut the tomatoes and spring onion
- Chop the pars ey, mint and coriander
- M x all the ingredients.
- Season with lemon juice, ol ve oil, salt and pepper

Tip:

This rec pe can be used with brown r ce, couscous and any other cereal or legume

Stuffed tomatoes

Source: Foundation for Development FAUTAPO

Ingredients:

5 tomatoes
40 g quinoa
3 cooked potatoes
1 tbsp red pepper
1 tbsp green pepper
Mayonnaise to taste
Lettuce leaves

Preparation:

- Rinse the quinoa and cook in water
- Cook the potatoes, let cool and peel.
- Halve the tomatoes and remove the pulp.
- In another bowl, mash the potatoes well and add the quinoa with the peppers and the mayonnaise.
- Mix everything and stuff the halved tomatoes
- Serve with lettuce leaves

Quinoa salad with avocado pebre

Chef Carlo von Mühlenbrock (Chile)

Serves: **6**

Ingredients:

For the salad

3 cups cooked quinoa
(one each: black, red and white)
½ cup red onion, chopped
½ cup coriander (cilantro), chopped
½ cup red pepper, diced
1 cup avocado, diced
3 lemons (juice)
1 cup tomato, diced
Olive oil
Salt
Green chili
Garlic

For decoration

Lettuce leaves
Parsley

Preparation:

- Squeeze the lemons and set aside the juice.
- In a bowl place the quinoa, red onion, pepper, avocado, tomato and green chilli.
- In another bowl combine the olive oil, salt, coriander, salt and lemon juice.
- Mix and serve with lettuce and chopped parsley

Tip:

While avocado has a high calorie content compared to most other fruits, it is a good source of monounsaturated fat.

Quinoa purée with potatoes

Source: Community of Laguna San Martin (Ecuador)

Ingredients:

1 cup quinoa (200 g)
3 potatoes (300 g)
1½ tbsp milk (330 g)
4 tbsp oil or margarine (60 g)
Salt

Preparation:

- Cook the rinsed quinoa in sufficient water for 30 minutes, until the grain is mushy
- Boil the potatoes and drain when cooked
- Mash the potatoes, place them in a saucepan and add the milk, salt, oil or margarine
- In a bowl, crush the quinoa with a wooden spatula, add to the above mixture and boil for 5 minutes
- Serve hot with meat or eggs

Tip:

The potatoes can be prepared in different ways and are a good source of energy

Germinated seeds

Chef Quique Dacosta (Spain)

Serves: **4**

Ingredients:

100 g leek, white part

20 g olive oil, mild flavour

150 g quinoa, preferably organic royal quinoa (quinua real)

500 g chicken stock

40 g oily fish (tuna, salmon, horse mackerel, sardine, anchovy, trout, mackerel ..)

10 g parsley

10 g chives

10 g mint

Olive oil

For the germinated seeds

250 g black lentils

250 g mung beans

15 g white mustard seeds

100 g white asparagus seeds

Tip:

It is best if the seeds for germination are organic as they are much healthier

Preparation:

This recipe requires prior preparation of the ingredients, at least 48 hours before preparation of the dish itself.

- The first step is to germinate the seeds. To do this, place the seeds on moist paper or cotton in a cool dark place for 48 hours. Mung beans need special treatment: leave them to soak for 12 hours, then drain and also place them on moist cotton.

- When you have the sprouted seeds, sauté them at the last moment with olive oil and salt for only 12 seconds (it is best to use them within 12 hours of germination).

- Chop the white part of the leek. Lightly fry in olive oil, add the chicken stock and then the quinoa. Cook for 15 minutes and let stand for five minutes before serving.

- Meanwhile, blend the parsley, chives and chopped mint in a food processor. Add extra virgin olive oil.

- Cut the fish into cubes and briefly sauté, leaving the inside of each cube uncooked.

- For the presentation, lay the cooked quinoa on the bottom on a dish, cover with the sautéed seed sprouts, drizzle with the herbed oil and top with the fish cubes. Any young leaves from the germinated seeds can be sprinkled over the dish.

Quinoa tamale with chicken

Source: Mariluz Tiocona Condori, Wiñay Warmi Association
"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)

Makes: **20 tamales**

Ingredients:

For the filling

600 g chicken breast
½ cup onion, finely diced
2 tbsp garlic powder
¼ kg black olives
4 tbsp yellow chili powder
Salt
Oregano
Pepper

For the tamale dough

1 kg white maize flour
½ kg quinoa flour
400 g pork lard
5 eggs
1 tsp baking powder
1 cup chicken stock (approximately)
Salt

Preparation:

- Start by preparing the filling. Cook the chicken with salt, pepper and garlic. Cut into pieces.
- Prepare a seasoning with the garlic powder, diced onion, salt to taste and vegetable oil.
- Add the chili powder and fry until golden brown. Then add the chicken in tamale portions and a small quantity of chicken stock until consistent in texture.
- To prepare the dough, place in a bowl the maize flour, quinoa flour and the eggs, one at a time, beating constantly.
- Add the lard and finally the cold chicken stock. Knead the mixture for 30 minutes until uniform.
- Soak the corn husks in lukewarm water and drain.
- Line the corn husks with dough, add the filling with its piece of chicken and olives.
- Close the tamales in their traditional shape and tie them with thick thread.
- Cook in bain-marie over low heat for about one hour.

Quinoa and pumpkin soup

Chef Matías Palomo (Chile)

Serves: **4**

Ingredients:

200 g quinoa
1 onion
600 g pumpkin
½ leek
½ fennel bulb
1 tbsp virgin olive oil
½ tsp jalapeño chilli
Fresh dill

Preparation:

- Dice the onion, leek and pumpkin.
- Rinse the quinoa and sauté in a pan with a tablespoon of hot olive oil for one minute, constantly stirring.
- Add the onion, leek and pumpkin and cover all the ingredients with water.
- Bring the mixture to the boil then lower the heat to the minimum. Simmer for 15 minutes, checking occasionally if more water is needed.
- A couple of minutes before turning off the heat, add the jalapeño chilli
- Use a blender to obtain a smooth mixture, not too thick.
- Cut the fennel into thin strips and sauté in a little olive oil in another pan, adding a pinch of salt, until golden brown.
- Serve the soup adding the fennel strips to each serving. Garnish with fresh dill.
- You can also garnish with plain yogurt

Quinoa empanadas with cheese

Source: Magda Irene Flores Mamani, Wiñay Warmi Association.
"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)
Makes: **70**

Ingredients:

2 kg flour
600 g white quinoa flour
600 g butter
5 eggs
20 g baking powder
50 g sugar
600 g cheese
Salt

Preparation:

- In a bowl sift the flours, baking powder and salt.
- Make a well in the centre to add the egg yolks, one at a time (keep the whites for glazing before baking). Mix in the butter with your hands until the mixture is uniform and without lumps. It is easier to work on a table top.
- Add water until you have a soft dough.
- Let it rest for 20 minutes.
- Divide the dough into the intended number of empanadas (pasties). With a rolling pin and on a floured board or table top, roll out each portion to a thickness of half a centimetre.
- Place the cheese in the centre of the dough which you then fold into the shape of an empanada.
- Glaze with egg white using a pastry brush.
- Bake in greased pans at medium temperature for 20 minutes or until golden brown.

Tip:

Cheese is a good source of calcium and protein but is also high in fat and energy, so it is important to limit cheese portions at meals.

Black quinoa, sweet potato, plantain and green leaf salad

Chef Matthew Boland and Darwin Jose Torres (Aruba)

Serves: **4**

Ingredients:

450 g sweet potato

450 g ripe plantain

2 cups fresh spinach (other options are Chinese cabbage, watercress or any other green leaf vegetable)

2 tbsp fresh basil

2 tbsp fresh coriander (cilantro)

½ cup green pepper, diced

1 cup fresh cucumber, seeded and diced

⅔ cup black quinoa

½ cup olive or vegetable oil

2 tbsp rice vinegar

Salt

Pepper

For the garnish (optional)

1 carrot

1 green plantain

Preparation:

- Wash and cook the quinoa. Leave to cool.
- Boil the sweet potato and ripe plantain separately. When cooked, cut into 2.5 cm cubes
- Wash the spinach leaves and keep in the refrigerator
- In a bowl mix all the ingredients and dress with vegetable oil and rice vinegar.
- Add salt and pepper to taste.
- To garnish you can shave carrot curls with a grater or potato peeler then toast them, and fry thin slices of green plantain. These garnishes can be sprinkled over the salad

Quinoa pie

Source: Magda Choque Vilca and farmers of the Humahuaca Gorge, Province of Jujuy (Argentina)

Ingredients:

½ cup quinoa
400 g goat or cow cheese
1 large onion
1 pepper
2 hard-boiled eggs
100 g green olives
3 tbsp self-rasing flour
2 eggs
Chive
Paprika
Salt
Pepper

Tip:

Serve the quinoa pie with a spinach, tomato and carrot salad to add some vegetables to the meal

Preparación

- Wash and cook the quinoa in water. Drain.
- Finely chop the onion and dice the pepper
- Start to prepare the pie filling by frying the onion and pepper in a pan.
- After 15 minutes add the condiments, chive, olives and three minutes later the finely diced cheese
- Turn off the heat and add the chopped hard-boiled eggs Set aside.
- Optionally, you can add fresh cheese or mozzarella to the filling
- Pre-heat the oven to a high temperature Meanwhile, grease a baking pan
- To prepare the pastry, combine the cooked quinoa with the fresh eggs and the flour Add salt, pepper and a teaspoon of paprika. Mix until the pastry dough is un form
- Cover the bottom of the baking pan with half the pastry dough. Add the filling, spreading it evenly, then the top layer. If using cheese, sprinkle on top.
- Bake in the oven at 180 °C for 20 minutes If using cheese remember to set the oven for grilling
- Serve

Photo courtesy of the Chef

Tabbouleh with wild mushrooms, black garlic and baby aubergine

Chef André Chiang (Singapore)

Serves: **4**

Ingredients:

(The mushrooms mentioned below are only suggestions. You may use any mushroom available in season)

1 oyster mushroom
1 hon shimeji mushroom
1 dry morel mushroom
1 chanterelle
1 dry black trumpet mushroom
¼ cup bulgur
¼ cup white quinoa
¼ cup red quinoa
¼ cup chives
1 tbsp truffle oil (optional)
¼ cup banana shallot
1 small onion
1 garlic clove, black
4 baby aubergines
4 slices jabugo ham (or optionally cured Iberian ham)
1 tbsp aioli

Tip:

Aioli is very easy to make at home. Crush two cloves of garlic in a mortar. Add a pinch of salt and a tablespoon of lemon or vinegar. Then gradually pour a ¼ litre of olive oil, starting with one drop at a time, while stirring. Optionally, you can add eggs in preparing the sauce: one egg per garlic clove.

Preparation:

- Peel the aubergines. Steam them with the slices of ham for 25 minutes, until cooked through and tender
- Sauté all the mushrooms available in season until slightly caramelized
- Add the chopped onion, shallots and garlic
- Strain the sautéed mushrooms and chop finely
- Wash and gently boil the quinoa and bulgur. Blend the mushrooms into the grains
- Season with salt, pepper and, optionally, a few drops of truffle oil or fresh truffles.
- Chop the black garlic and mash it into a puree. Pass through a sieve and make smooth with a spoonful of aioli
- To serve, decorate the bottom of the plate with a spoonful of garlic paste and place the eggplant slightly on the paste, accompanied by the mushroom and grain mixture. Finely cut the chives with scissors and sprinkle over the mushroom and grain mixture

Quinoa and laksa leaf salad with goat cheese, wakame and red wine

Chef Chris Salans (Indonesia)
Serves: **6**

Ingredients:

400 g quinoa
30 g shallot, chopped
20 g chives, chopped
50 g laksa leaves, sliced
(can be rep aced with
Vietnamese coriander)
60 g candied kumquats
1 lemon
Sa t
Pepper
Ol ve o

For the goat cheese mixture

200 g goat cheese
(idea ly French goat cheese)
150 ml fresh cream
(30-35% fat content)

For the red wine glaze

200 ml pinot noir wine
200 g black grapes
20 g glucose syrup

For the wakame tuile

35 g dried seaweed
300 ml water
50 g lemon zest
75 g shallot, chopped
10 g salt
3 g b ack pepper
60 ml olive oil
20 g instant yeast
900 g bread flour
200 g sourdough

For the garnish

Microgreens

Preparation:

- Boil the quinoa in vegetable stock until cooked. Leave to cool
- Mix the quinoa with the shallot, chives, laksa leaves and candied kumquats. Season with lemon juice, salt, pepper and olive oil to taste.
- For the goat cheese mixture, soften the goat cheese by beating and stirring with a spoon or spatula, then beat in a mixer. Gently whisk the fresh cream and combine it with the goat cheese. Season to taste. Place on a tray and leave to rest overnight in the refrigerator
- For the glaze, mix the wine, grapes and glucose syrup and cook over low heat until the grapes have burst open. Strain under pressure to extract all the grape juice. Cook to reduce the liquid to a good glaze consistency
- For the wakame tuile, boil the water and add the wakame, lemon zest and shallot. Mix together
- Once the seaweed is at room temperature, mix with the flour, sourdough, yeast, olive oil, pepper and salt. Place all the ingredients in a baking pan and leave to rise, as though you were making bread.
- When the dough has risen, bake at 180 °C until ready
- Leave to cool to room temperature then freeze the bread.
- Once frozen, cut the bread into thin slices. This can be done with a meat slicer
- Re-bake at 180 °C until the bread is crispy.
- For presentation, decorate the bottom of the plate with the red wine glaze. Place two goat cheese quenelles and the quinoa salad on the plate. Garnish with 2 wakame slices and the microgreens. Serve immediately.

Tip:

The sourdough is obtained in the following way: mix equal amounts of water and flour. Leave to rest at room temperature for 24 hours. On the second day, separate half the dough and fill again with equal parts flour and water. Repeat the process on the third day. On the fourth day you should have sourdough with its characteristic large gas bubbles

Photo courtesy of the Chef

Quinoa salad with red fruits

Chef Joan Roca (Spain)

Serves: **4**

Ingredients:

250 g quinoa
2 cups (500 ml) water
Strawberries
Cherries
Small strawberries
Acacia flowers
Thyme flowers
Purple coloured flowers
50 g spring onion
50 g red pepper
50 g green pepper

For the lemon vinaigrette

140 g olive oil
30 g lemon juice
Salt
Pepper

Preparation:

- Cut all the vegetables into very small cubes (brunoise). Set aside.
- Cook the quinoa for 12 minutes in the water. Cool and mix with the chopped vegetables. Set aside.
- For the vinaigrette, mix the oil with the lemon juice. Season with salt and pepper.
- To serve, dress the quinoa with the lemon vinaigrette. Place the quinoa on a plate, add the small strawberries, the larger strawberries cut in half and the sliced cherries. Finally, decorate the salad with the flowers.

Quinoa salad with toasted cumin and lemon vinaigrette

Chef Malika van Reenen (South Africa)

Serves: **4**

Ingredients:

2 cups quinoa
4 carrots
12 cherry tomatoes
2 celery stalks
½ cucumber
½ green chilli
30 g rocket
1 handful coriander (cilantro)
100 g feta cheese

For the vinaigrette

1 tsp cumin seeds
50 ml lemon juice
15 ml honey
100 ml olive oil
Salt
Pepper

Preparation:

- Wash and drain the quinoa. Boil in water or vegetable stock, two parts liquid for one part quinoa
- Cook for 15 to 20 minutes (add herbs if you wish).
- Strain the quinoa and let cool. Set aside
- Grate the carrots, halve the cherry tomatoes, chop the coriander and chilli, slice the celery, and seed and slice the cucumber
- Toast the cumin seeds (until you smell the aroma)
- For the vinaigrette, lightly crush the toasted cumin in a mortar and then mix with the lemon juice, honey and olive oil
- Mix all the ingredients in a large bowl, including the vinaigrette
- To serve, line the plates with rocket. Place the salad on top and cover with the feta cheese

Quinoa salad with tuna and ginger

Chef Takahiro Tozawa (Japan)

Serves: **6**

Ingredients:

1 cup quinoa
2 handfuls seaweed
2 cans (80 g) tuna
2 tomatoes, chopped
2 spring onions
Shaved ginger, to taste
Wine vinegar, to taste
Lemon juice, to taste
Salt, to taste

Preparation:

- Cook the quinoa in two cups of water
- Chop the seaweed, spring onions and tomatoes
- Rinse the cooked quinoa in a strainer and place in a bowl with the tuna
- Add the shaved ginger, wine vinegar, lemon juice and salt to taste.
- Mix all the ingredients

MAIN COURSES

Quinoa chilli

Source: Foundation for Development FAUTAPO (Bolivia)

Ingredients:

⅓ cup quinoa
½ kg meat
1 carrot
2 onions
1 tomato
5 potatoes, chopped and cooked
1 garlic clove
2 tbsp red chilli
Salt
Pepper
Oil

Preparation:

- Wash and cook the quinoa
- In a pan heat the garlic, chopped vegetables to taste and minced meat.
- Add the red chilli, season with salt and pepper to taste and leave to cook
- Once everything is cooked mix in the quinoa and potatoes
- Bring to the boil so that all the ingredients combine
- Serve

Tip:

Meat is a good source of protein and iron. Cutting off the fat before cooking can help reduce its fat and calorie content.

Quinoa soup with pork

Source: Comunidad Laguna San Martín (Ecuador)

Serves: **5**

Ingredients:

½ cup quinoa (100 g)
250 g pork
3 medium potatoes (300 g)
1 small onion (40 g)
2 tbsp peanut, toasted and ground (30 g)
2 garlic cloves (5 g)
1 tsp coloured lard (5 g)
2 tsp coriander (5 g)
1 cup milk (125 g)
9 cups water (2000 g)
Salt

Preparation:

- Boil the quinoa without salt in already boiling water for 30 minutes
- Cook the pork cut into small pieces together with the salt and the finely chopped onion and garlic.
- Add the coloured lard and cook for 30 minutes
- Add the quinoa.
- Add the peeled and sliced potatoes and boil for 15 minutes
- When the mixture is cooked, add the peanut previously dissolved in the milk, and then the coriander

Tip:

The meat can be replaced by cheese which is added at the end of the preparation.

Quinoa tortilla

Chef Joseph Brozovich (Bolivia)

Serves: **4**

Ingredients:

8 eggs
½ cup tricolour quinoa
1 small onion, finely chopped
2 tbsp butter
1 cup tomato, peeled, seeded and diced
Fresh basil leaves
Salt
Pepper

Preparation:

- Wash and cook the quinoa
- In a non-stick pan melt the butter and brown the onion over high heat. Lower the heat and continue to cook until the onion is caramel brown and tender enough to come apart
- Add the peeled, seeded and diced tomato and the fresh basil leaves.
- Add the cooked quinoa and the previously beaten eggs

Quinoa soup with diced beef

Source: Guadalupe Community (Ecuador)

Ingredients:

½ cup quinoa (100 g)
250 g beef
1 medium carrot (100 g)
½ cup fresh peas (75 g)
2 medium potatoes (200 g)
1 medium onion
1 garlic clove
2 tsp coriander (cilantro)
2 tbsp oil or coloured lard (30 g)
Salt

Preparation:

- Boil the quinoa for 30 minutes
- Cook the diced beef and the finely chopped onion and garlic with the oil or coloured lard. Leave to cook for 15 minutes
- Add the diced carrot and the peas. Cook for 15 more minutes
- Add the potatoes chopped into medium-size pieces and cook until ready.
- Add the chopped coriander
- Serve hot

Tip:

Meat is a good source of protein and iron. Cutting off the fat before cooking can help reduce its fat and calorie content.

White quinoa broth with lamb

Source: Victoria Coila Zapana, Wiñay Warmi Association
"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)

Serves: **10**

Ingredients:

250 g white quinoa
10 lamb pieces
1 kg imilla potatoes
¼ white chuño (tunta) (freeze-dried potato)
100 g chickpea
10 cabbage leaves
3 corn cobs, sliced
1 onion for seasoning
Celery and onion to taste
Salt
Oregano
Pepper
Oil

Preparation:

- Sauté the finely diced onion in a little vegetable oil, with oregano, salt and pepper
- Add the pieces of lamb. Cook until the meat releases its juices, then add 10 cups of water Next add the chickpea, cabbage and celery
- Separately, in a pressure cooker, parboil the quinoa in two cups of cold water without salt for 15 minutes
- Once the lamb is cooked, add the parboiled quinoa and bring to the boil to release its whiteness and flavour
- As soon as brought to the boil, add the potatoes, the white chuño and the corn cob slices, and cook until done
- Serve in a bowl and sprinkle with parsley

Tip:

Legumes like chickpeas are a good source of fibre, protein and minerals

Quinoa and fish stew

Source: Wiñay Warmi Association

"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)

Serves: **5**

Ingredients:

1 cup quinoa
5 pieces fried fish
4 tbsp fresh cheese
1 cup milk
1 medium onion
2 large corn cobs
5 large potatoes
1 cup green beans
1 cup squash, chopped
2 celery stalks
Garlic
Cumin
Pepper
Coriander

Preparation:

- Fry the fish in a little oil and seal each piece on both sides
- Wash and cook the quinoa in water.
- Fry the crushed garlic with the cumin, pepper, onion and celery. Add to the cooked quinoa.
- Add the squash, green beans, sliced corn cobs and potatoes cut into strips
- When everything is cooked, add the cheese.
- When serving the stew, add the milk and fish

Tip:

When buying milk, choose milk that is low in fat to reduce the energy and saturated fat content.

Quinoa burger

Chef Martiniano Molina (Argentina)

Serves: **4**

Ingredients:

250 g quinoa seeds
2 onions
1 leek
400 ml hot vegetable stock
80 g pumpkin, grated
2 tbsp sesame seeds
2 tbsp sunflower seeds
2 tbsp flax seeds
Fresh parsley
2 tbsp olive oil
Salt
Ground black pepper

To accompany the burger

2 round tomatoes
150 g mozzarella cheese
Fresh basil
Olive oil
Salt
Ground black pepper

Preparation:

- Wash the quinoa
- In a pot (preferably earthenware) gently heat the chopped onions and leek in 2 tablespoons of olive oil until lightly browned
- Stir in the quinoa and hot vegetable stock. Cook uncovered at low boil for 10 minutes
- Stir in the grated pumpkin, the seeds, and the salt and pepper. Mix and turn off the heat. Cover and let stand until completely cool.
- Add chopped parsley and leave in the refrigerator for 2 hours
- Remove, mix well and shape the burger patties with the palms of your hands, which you have previously moistened with cold water.
- Brown the burgers on both sides in a frying pan with a few drops of olive oil
- To serve, accompany with a salad of diced fresh tomato, pieces of mozzarella and fresh basil strips, seasoned with salt, olive oil and black pepper

Puñuchi (*quinoa soup*)

Source: Promotion of Andean Development RURANDES
"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)

Serves: **5**

Ingredients:

½ kg washed quinoa
5 bunches spring onion
3 carrots
10 garlic cloves
1 tbsp oil
Salt

Preparation:

- Wash the quinoa and cook in water together with the finely chopped vegetables
- Separately, prepare the seasoning with the chopped onion and the split garlic cloves
- Add with more water and boil on low heat, constantly stirring gently to avoid burning the bottom of the pot.
- Finally, add salt to taste and remove from the heat. To make "puñuchi" wrap the pot in a hide or blanket and let the cooking finish by itself. Puñuchi means "sleeping food" as the food cooks away from the heat.

Tip:

Carrots are rich in vitamin A, which plays a role in developing our eyesight, bone growth, reproduction, cell functions and the immune system.

Valencian paella with seafood and quinoa

Chef Juan José Peralta (Bolivia)

Serves: **4**

Ingredients:

3 cups quinoa
6 cups fish stock (made from fish bones and heads)
½ kilo assorted seafood
½ chicken breast, diced
1 red pepper
2 tomatoes
2 garlic cloves
1 cup peas
2 cups broad beans
1 cup green beans
½ bottle white wine
3 tbsp parsley, chopped
3 tbsp mint, chopped
1 tbsp white pepper, ground
1 tbsp powdered saffron
3 tbsp ground Arequipa red pepper pod
¼ cup olive oil
2 Spanish chorizos

Preparation:

- Cut the tomatoes in half, seed and dice (brunoise)
- Cut the pepper, seed and cut into strips (julienne).
- Soak the Spanish chorizos in warm water for 5 minutes. Remove the skin and slice into discs
- Chop the garlic cloves
- Heat the olive oil in a paella dish, add the chorizo and gently fry for a few minutes. Add the pepper and garlic. Stir and leave to cook for a few minutes
- Add the beans, peas and green beans. Stir the whole mixture and add the chopped tomatoes
- Add the quinoa then the fish stock to the paella
- Add the parsley, mint, saffron and the red pepper, already cooked
- Dice the chicken breast and sauté
- Combine the seafood and the diced chicken with the whole paella
- When the paella begins to dry, add the white wine and maintain on low heat

Hot quinoa ceviche

Chef Flavio Solorzano (Peru)

Serves: **4**

Ingredients:

3 tbsp vegetable oil (50 ml)
30 g diced garlic
3 tbsp mirasol chili paste
1 tbsp yellow chili paste
1 tsp black pepper
1 tsp cumin
1 tsp turmeric
350 g quinoa
100 g cassava, coarsely grated
2 tsp salt
3 lemons
100 g red onion, thick julienne
2 mochero chilies

For the stock

1 kg chicken bones
10 g ginger, sliced
½ white onion
4 garlic cloves, peeled
¼ carrot
12½ cups water (3 lt)

For the garnish

2 tbsp annatto oil
100 g chicken breast, shredded
60 g spring onion
30 g coriander (cilantro) stems and leaves

Preparation:

- To make the stock, boil the bones, white onion, ginger, peeled garlic cloves and carrot in 3 litres of water for 1 hour
- Strain the resulting stock (about 1 litre)
- Meanwhile, rinse and drain the quinoa
- Grate the cassava with the coarse side of a box grater.
- Crush the mochero chili with a knife blade or pestle. Do this only once to keep the chili intact
- Squeeze the lemons
- In the oil, gently fry the garlic, the mirasol and yellow chili pastes and the spices (pepper, cumin and turmeric) for 30 minutes.
- Add the chicken stock you prepared before
- Add the quinoa and begin to cook with the pot covered
- After 10 minutes add the cassava
- After 12 minutes sauté the red onion and add to the quinoa with the previously crushed mochero chilies
- Add the lemon juice
- Continue cooking for 14 minutes
- Heat the annatto oil and sauté the shredded chicken breasts, spring onion and coriander stems
- Serve the ceviche in a bowl and decorate with the sautéed garnish and coriander leaves

Scrambled eggs with quinoa

Source: Alejandrina Mendoza. Recipe gathered with help from Magda Choque Vilca (Argentina)

Serves: **5**

Ingredients:

2 onions
1 pepper
⅔ cup quinoa
250 g goat cheese
3 eggs
Turmeric or saffron
Chives

Preparation:

- Wash and boil the quinoa
- Chop the onion and dice the pepper
- Cook the onion and the pepper
- Once cooked, add the saffron or turmeric and finally the eggs and cheese
- Stir in the previously cooked and cooled quinoa
- Serve with a sprinkling of chives. Accompany with toast, if desired

Tip:

Green peppers are a good source of vitamin C.

Stuffed mushrooms

Chef Rubén Vega Soler (Ecuador)

Serves: **4**

Ingredients:

1 red pepper
1 yellow pepper
1 pearl onion
1 bay leaf
3 tsp tomato paste
½ tsp Spanish paprika
1 cup quinoa
3 cups light chicken stock
v200 g fresh mushrooms
O ve o
Dr ed herbs
Sa t
Pepper

Preparation:

- D ce (brunoise) the peppers and on on. Gently fry for a few minutes
- Add the bay leaf, paprika and tomato paste Salt and pepper to taste. Set aside
- Cook the quinoa in the chicken stock unt. tender, then combine with the fried peppers and onion.
- Clean the mushrooms and fill the caps with the above m xture
- P ace in the oven for 5 m nutes.
- Serve with o ve oil and herbs (rosemary, thyme, curly parsley and marjoram)

Quinoa stew

Fuente: Teresa Berta Cardozo, of the indigenous community of Ayllu Mama Kolla (Argentina)
Recipe gathered with help from Magda Choque Vilca

Ingredients:

1 ⅓ cups quinoa
2 onions
1 red pepper
100 g dried meat (charqui)
1 tomato
3 cups vegetable stock
Paprika
Parsley, chopped
Neutral oil
Salt
Pepper

Preparation:

- Wash and cook the quinoa in water.
- Finely dice the onions and red pepper. Peel and dice the tomato
- In a hot pan pour the oil and, when hot, add the onion and red pepper
- Add salt and gently fry
- Add the tomato and the remaining condiments
- Crush the dried meat and separate the strands Add to the pan
- Add the hot vegetable stock, let boil then add the previously cooked quinoa
- Once the liquid has evaporated and the mixture thickens, remove from the heat.
- Serve with chopped parsley.

Tip:

Limit the sodium content of the dish by choosing vegetable stock with low sodium content. Limiting sodium in meals is especially important for people with high blood pressure

Quinoa meatballs in sauce

Chef Orfelinda Negrete (Peru)

Serves: **4**

Ingredients:

1 lemon
1 onion
1 green chili
1 cup quinoa
2 tomatoes
½ tbsp garlic, crushed
1 tbsp cheese, grated
2 tbsp raisins
2 tsp parsley, chopped
1 tsp oregano
1 tbsp rosemary
2 tbsp ground beef
1 cup beef stock
7 racachas (white or Peruvian carrot)
Butter
Evaporated milk
Salt
Pepper

Preparation:

- Soak the quinoa from a previous day with the juice of a lemon
- Wash the quinoa 3 or 4 times before cooking
- Chop the onion and tomatoes. Grind the chili.
- Prepare a seasoning with the onion, tomato and chili and add salt, pepper and garlic
- In a separate bowl place the quinoa, grated cheese, parsley, oregano, raisins and ground beef. Knead to mix well and form meatballs
- Pour the beef stock into a pan, add the seasoning and bring to medium heat
- When the stock is boiling, carefully add the meatballs, one beside the other.
- Lower the heat and cook until ready
- Accompany with racacha puree
- To make the puree, cook the racachas until ready and grind. Add butter, evaporated milk to taste, salt and pepper. Mix the ingredients and serve.

Lentils with quinoa

Source: Feria Libre Nueva Esperanza de Arica (Chile)

Serves: **4**

Ingredients:

1 cup cooked quinoa
2 cups lentils
1 onion
2 carrots
Oil
Garlic, salt and pepper to taste

Preparation:

- Previously cook the quinoa in 2 cups of boiling water
- Reduce the temperature and cook on low heat for about 15 minutes, or until the water has evaporated and the quinoa is tender
- Pour oil into a pot, add the onion chopped into large cubes and season with salt, pepper and garlic to taste.
- Add the previously washed lentils and the carrots chopped into half circles. Cover with water (two fingers above the lentils) and cook on high heat until boiling
- Lower the heat and continue to cook until the lentils are tender, about 30 minutes
- Then add the cooked quinoa and mix well

Tip:

Lentils mixed with quinoa or cereals, such as rice or noodles, are a good source of protein

Quinoa coated sardines, served on sautéed black quinoa accompanied with chakalaka and fresh vegetables

Chef Citrum Khumalo (South Africa)

Serves: **4**

Ingredients:

For the fish

2 cans sardines
2 eggs
1 cup fresh milk
1 cup quinoa flour
1 litre cooking oil
Salt
Pepper

For the quinoa

1 cup quinoa
2 tbsp onion, chopped
1 cup vegetables, sautéed in wok
2 tbsp oil

For the chacalaka

2 tbsp onion, chopped
1 ½ cup tomato, diced
2 tbsp tomato paste
½ cup kidney beans, cooked
1 carrot, diced
1 celery stalk, chopped
1 green pepper, chopped
1 scotch bonnet pepper, chopped
4 tbsp cooking oil
2 tbsp fresh coriander (cilantro)
½ tsp cumin seeds
4 tsp turmeric
1 tbsp cayenne pepper
1 tsp ground cinnamon
4 tsp masala
2 tsp cumin powder

For the garnish

Microgreens

Preparation:

- Beg n by cooking the quinoa in 3 cups of water and a pinch of salt until tender. When cooked, p ace in a clean bowl and set as de.
- To prepare the sardines, begin by m xing 2 eggs, the milk and a pinch of sait.
- P ace quinoa f our on a dish, seasoned with salt and pepper Dust the fish w th the flour, d p in the beaten egg and fin sh by coating w th flour. Piace on a clean dish and keep in the refrigerator.
- Keep the liquid from the fish for the chakalaka
- For the chakalaka, beg n by heating a pan with 2 tablespoons of oil Sauté 2 tablespoons of onion, celery and carrot, and continue cooking for 2 minutes. Add all the spices and cook for another 2 m nutes. Add the tomato and tomato paste and continue cooking for 5 minutes Add the beans and the l.quid from the fish and cook until everything is well combined Set aside and keep warm
- Heat another pan with 2 tab espoons of oil and sauté the rema.ning onion Add vegetab es previous y sautéed in a wok and cook for 3 minutes Add the quinoa and continue cooking until all the ingredients have combined wel and are cooked
- Heat 1 litre of oil and deep-fry the f sh until golden brown. Dry off the oil with a paper towel
- Serve the fish on the quinoa and top with the chakalaka. Garn sh with microgreens
- For a vegetarian version of this dish, eliminate the sardines, add the quinoa to the chaka aka, without the fish liquid, and serve topped with microgreens

Spicy minced pork and mushrooms with quinoa grilled in banana leaves

Chef ML Sirichalerm Svasti (McDang) (Thailand)

Serves: **4**

Ingredients:

8 banana leaves for wrapping (or lotus leaves)

20 bamboo skewers

For the paste

10 garlic cloves

15 Thai chilies

2 stems lemongrass

For the meat mixture

2 cups minced pork

3 tbsp soy sauce

1 cup oyster mushrooms

2 cups black quinoa (or other available colour)

5 cups water

½ cup light dairy cream

1 tbsp butter

For the garnish

4 boiled eggs

½ cup long, fresh chilies (red, yellow and green)

½ cup Thai basil leaf

Preparation:

- Soak the quinoa for a few hours and rinse
- Heat a pan, add the quinoa and slowly pour in water while stirring. Add more water as the water evaporates. At the end of cooking, add the cream and butter
- For the paste, crush the garlic, chilies and finely chopped lemongrass in a mortar until you have a paste
- In a bowl, mix 2 tablespoons of the paste with the minced pork, soy sauce and mushrooms, previously torn into pieces by hand. For a less spicy dish, reduce the amount of paste
- Place two banana leaves one on top of the other to wrap the ingredients
- For each portion, place four or five slices of chili in the centre of the banana leaves, and two egg halves, face down. Sprinkle with Thai basil leaf and cover with ½ cup of the minced pork mixture
- Add ⅓ cup of cooked quinoa onto the minced pork mixture
- Wrap everything with the banana leaves and secure with bamboo skewers.
- Grill the banana leaf wraps at low heat until the pork is cooked. You can also steam
- Serve hot.

Tip:

In the recipe you can use other types of meat or rice instead of quinoa

Stir fried quinoa with Thai style chicken satay and peanut sauce

Chef Lorenzo Rosso (Thailand)

Serves: **4**

Ingredients:

For the stir fried quinoa

½ cup white quinoa
1½ cups chicken stock
2 tbsp onion, finely chopped
1 tbsp carrot, diced
1 tbsp cucumber, diced
2 tbsp butter
2 tbsp coriander leaf (cilantro)
Kosher salt

For the chicken satay

450 g chicken breast
1 tbsp curry powder
2 tbsp light coconut milk
1 tbsp sugar
1 tbsp fish sauce

For the peanut sauce

3 tbsp ground peanuts
1 tbsp red curry paste
1 tbsp vegetable oil
1 tbsp fish sauce
2 tbsp palm sugar
3 tbsp light coconut milk

Preparation:

- Rinse the quinoa.
- In a heavy-bottomed saucepan, melt the butter over low heat
- Add the finely chopped onion and the diced carrot and cucumber. Cook for a few minutes or until the onion is translucent
- Add the chicken stock, salt to taste and bring to the boil
- Slowly stir in the quinoa and reduce the heat to a very low simmer.
- Cover and cook for 15 minutes or until all the liquid has been absorbed
- The tiny 'tails' of the quinoa seeds will uncoil when the quinoa is fully cooked
- Remove from heat and let stand, covered, for 5 minutes
- Add the coriander just before serving
- Meanwhile prepare the chicken satay. Cut the chicken into thin strips and marinate with curry powder, coconut milk, sugar and fish sauce
- Make the satay by threading the chicken pieces onto bamboo skewers
- Grill until well done, making sure the chicken is kept juicy and moist on the inside.
- To prepare the peanut sauce, heat the vegetable oil on low heat in a heavy-bottomed saucepan
- Add the curry paste and stir for one minute.
- Add the ground peanuts and coconut milk. Simmer gently until the sauce has reduced by half
- Season to taste with palm sugar and fish sauce
- Serve by placing the stir fried quinoa on a large dish, surrounded by the chicken skewers. Sprinkle with fresh coriander and serve with the peanut sauce.

Pan fried rawas fillets with quinoa upma and kairi curry sauce

Chef Rahul Akerkar (India)

Serves: **4**

Ingredients:

For the kairi curry

100 g green mango
15 g basmati rice
25 g jaggery (otherwise panela or cane sugar)
1 tsp turmeric powder
½ tsp fenugreek seeds
½ tsp black mustard seeds
8-10 curry leaves
120 ml light coconut milk
300 ml vegetable stock
30 ml sunflower or groundnut oil
Salt

For the quinoa upma

150 g quinoa (red, white and black)
200 ml vegetable stock
15 g onion, chopped
5 g green chilli, chopped
½ tsp black mustard seeds
½ tsp turmeric powder
5 g almonds
5 g cashew nuts
5 g raisins
5 g parsley, chopped
5 g chives, chopped
6-8 curry leaves
10 ml olive oil
1 lemon
Salt
Pepper

For the rawas

500 g rawas fillet
(can be substituted by any firm white fish such as snapper or grouper).
Clarified butter
Juice from 1 lemon
Salt

Preparation:

- Start by preparing the kairi curry. Peel the mango, separate the flesh from the seed and cut into large cubes. Boil these in 150 ml of vegetable stock and half the turmeric powder, until tender

- Drain the water and blend the mango into a smooth paste with a food processor

- Dry fry (no oil) the rice in a pan on high heat, until it begins to brown. Remove immediately and grind into a fine powder

- In a heavy-bottomed saucepan, heat the oil on high heat and temper the fenugreek and mustard seeds. Then add the remaining turmeric powder and the curry leaves.

- Next, add the mango purée to the tempered spices, mix well and cook on low heat until the purée starts to bubble. At that precise moment, add the remaining vegetable stock (150 ml) and the coconut milk and simmer on low heat for a short while. Make sure the heat is low to prevent the coconut milk from 'curdling'

- Add the rice flour to the mixture and gently simmer until the sauce starts to thicken. Season with salt.

- Add the jaggery or panela to the sauce and continue simmering until it completely dissolves to give the sauce its bittersweet taste. If using cane sugar or panela, add a teaspoon of tamarind paste. Set aside and keep the sauce warm until serving

- Continue by preparing the quinoa upma. Pour the vegetable stock into a pan and bring to the boil. Remove from the heat and add the quinoa. Cover the pan with transparent plastic film and leave for 15-20 minutes until the quinoa softens

- Heat the oil in a pan on high heat and add the black mustard seeds. Once the seeds start to pop, add the turmeric powder, chopped onion, chilli, raisins, cashew nuts, almonds and curry leaves and sauté on low heat until the onions become translucent and the cashew nuts a little brown

- Add the softened quinoa to the pan and combine well with the sautéed spice mixture. Season with salt, pepper and lemon juice and sprinkle with chopped parsley and chives. Set aside

- Before serving, cut the fish into 4 fillets of approximately 125 g each, with skin. Season the fillets with the lemon juice and salt, and brown them in a pan with clarified butter, skin side down, until the fish is done and the skin is crispy. Remove from the pan and gently remove excess butter with a paper towel

- Serve the fish with the quinoa upma and kairi curry

Tip:

To make clarified butter, place the butter in a pan over medium heat. Avoid pre-heating the pan and leave it uncovered. When you see a solid frothy white layer forming on the surface, remove from the heat. Skim off the white layer and strain the liquid through a cheesecloth filter. Let cool and store in the refrigerator

About this dish:

For this recipe the chef used quinoa instead of semolina, which is normally used to make upma, a traditional breakfast dish in South India. Upma is cooked as a thick porridge containing roasted semolina and various condiments and vegetables. The kairi (green mango) curry sauce is an adaptation of a distinctly "bittersweet" curry that is made with jaggery, green mango and coconut milk

Quinoa tabbouleh with chicken breast

Chef Alfredo Oropeza (Mexico)

Serves: **4**

Ingredients:

For the tabbou eh

1 cup quinoa

2 cups water

1 small bunch parsley

2 spring onions

1 cup fresh mint leaves

3 tomatoes

½ serrano ch lli

2 tbsp ol.ve oil

¼ cup lemon ju.ce

Salt

Pepper

For the chicken

3 green tomatoes

½ onion

1 chile de arbol (arbol ch lli), dried

1 chile de arbol, fresh

1 cup coriander (cilantro)

2 tsp ginger

1 chicken breast, boneless, skin ess, sem - flattened

3 tbsp olive oil

Preparation:

- Wash the quinoa and cook w th the cups of water and a little salt When read, coo and set aside.
- Chop the parsley, onion and mint Seed and fine y dice the tomatoes
- To prepare the tabbouleh place all the ingred ents in a bowl and mix thoroughly unt. perfectly blended Refr gerate for a few minutes
- To prepare the ch cken, cut the tomatoes into quarters, fine y chop the onion and chilles Wash, d sinfect and chop the coriander, includ ng the stems.
- Heat two tablespoons of olive oil in a pan over medium heat, add the tomatoes and stir occasional y
- When the tomatoes begin to change colour, add the ginger, onion and coriander
- Cook for 2 minutes until all the ingredients are tender Be sure to stir the ingredients to avoid burning.
- Crush the preparation with a mortar (or molajete), creating a sauce, and add the chil es. Cool
- Cut the ch cken breast in ha f and coat w th ha f the sauce Cook on a hot grill, brushed w th one tablespoon of o ve o.l, until well cooked
- Leave the chicken to rest for a few minutes before cutting into strips.
- To serve, place a bed of tabbou eh on the plate, top with a portion of chicken and pour the sauce over to taste.

Photo courtesy of the Chef

Crispy sole with quinoa and spicy fennel

Chef Claude and Thomas Troisgros (Brazil)

Serves: **4**

Ingredients:

For the spiced oil

1 tbsp curry powder
1 tbsp ground cumin
1 tbsp coriander seeds
1 tbsp paprika or ground chilli
1 tbsp ground ginger
1 tbsp chopped garlic
1 tbsp cayenne pepper or chilli powder
500 ml extra virgin olive oil
Salt

For the fennel salad

2 fennels
100 ml spiced oil
100 ml Pernod liquor
Juice of one lemon
80 g dark raisins
2 cl honey
Chopped parsley, basil, chive and coriander
Pepper
Salt

For the quinoa

100 g quinoa
Salt

For the sole

800 g sole fillet
2 tbsp flour
2 eggs, lightly beaten
1 tbsp olive oil
Black pepper
Salt

Preparation:

- To prepare the spiced oil, begin by toasting the curry, cumin, ginger, coriander, paprika, cayenne pepper and garlic in a pan for 2 minutes, taking care not to burn the spices.
- Add the olive oil and mix all the ingredients in a blender. Set aside this oil 24 hours before use
- Clean the fennel, remove the leaves and cut into slices
- Pour the spiced oil into a pan and, when hot, fry the fennel slices for 6 minutes. Season with salt and pepper
- Add the raisins, honey and lemon juice.
- Flambé with the Pernod
- Remove from the pan and place in a bowl. Add the coriander, chive, basil and parsley. Leave to marinate for 2 hours
- Next, wash the quinoa and cook in salted water for 20 minutes. Strain and let cool. Dry thoroughly on a plate
- To cook the sole, season both sides of the fish with salt and black pepper. Dip the inside of the fish in the flour and the egg and coat with quinoa. Press the quinoa with your hand so that it sticks to the fish
- Fry the fish on the side with the quinoa and turn over
- To serve, place the fennel salad on the plate and the sole on top. Garnish with fennel leaves and sprinkle with spiced oil, if you wish.

Quinoa polenta with pork in tomato

Chef Adolfo Perret (Peru)

Serves: **4**

Ingredients:

For the polenta

2 cups quinoa

¼ cup onion, chopped

1 garlic clove, finely chopped

6 cups vegetable or chicken stock

Oil or lard for frying

For the pork in tomato sauce

3 cups chopped pork leg

5 tomatoes

2 carrots

½ cup onion, chopped

2 garlic cloves, chopped

1 bay leaf

Oregano

1 cup chicken stock or water

Salt

Pepper

Preparation:

- Lightly grind the quinoa. This can be done using a mortar or stone. You can also use a blender to grind the quinoa for a few seconds only.
- In a saucepan prepare a seasoning with the onion and garlic. Add the vegetable stock and bring to the boil on high heat.
- Then, sprinkle the quinoa stirring constantly until it begins to thicken and is cooked. Season with salt.
- Meanwhile, prepare the sauce. For this, season the pork with salt, pepper and a finely chopped garlic clove. Let stand for 10 minutes.
- In a pan with little oil, fry the pork until browned and set aside.
- Finely dice the onion, carrots and tomatoes. In a pot, fry the onion and garlic until the onion is translucent. Add the tomato, carrot and bay leaf and occasionally stir for two more minutes. Add the stock or water and a little salt and cook for 15 minutes on low heat.
- Finally, add the cooked pork to the pot and sprinkle with oregano. Cover and let stand.
- Serve the quinoa polenta topped with the pork in tomato sauce.

Cocoffinoa chicken

Chef Débora Fadul (Guatemala)
Serves: **4**

Ingredients:

2 chicken breasts

For the garam masala

1 tbsp ground cumin
1 tsp ground coriander
1½ tsp cardamom
1 tsp ground black pepper
1 tsp ground cinnamon
½ tsp ground clove
½ tsp nutmeg
½ tsp white pepper powder

For the filling

4 slices smoked provolone cheese
4 basil leaves
¼ cup pumpkin seeds
1 tbsp cardamom, large
½ onion
½ tbsp dill, dried
¼ tbsp garam masala
30 ml chancal or white rum
1 tbsp olive oil, large
Salt
Black pepper

For the crust

1 cup flour
1 egg
2 cups red quinoa
Salt
Pepper
Canola oil

For the sauce

½ onion
2 garlic cloves
1 cup red quinoa
1 tbsp coffee, large
2 tbsp cocoa, large
¼ cup sugar
½ cup light dairy cream
2 cups fresh water
Olive oil
Salt
Pepper

For the garnish

Basil leaves

Preparation:

- To prepare the garam masala, put all the ingredients in a food processor and reduce them to powder. Since this recipe requires ¼ tablespoon of garam masala, you can store the remainder in a cool place.
- Prepare the chicken filling. Finely chop the onion and fry in a pan with olive oil over medium heat, together with the cardamom, pumpkin seeds, garam masala and dill.
- Mix well until the seeds start to brown.
- Carefully pour in the liquor and leave until reduced. Season with salt and pepper.
- Remove from the heat and transfer to a food processor or blender.
- Leave to cool in a bowl.
- While the previous mixture is cooling, place the chicken breasts on a wooden board and cut butterfly style, taking care not to cut right through.
- Wrap the chicken in plastic film and gently flatten with a mallet.
- Remove the film, lay out the chicken, add salt and pepper and place the cheese and 2 basil leaves on one of the halves of the chicken.
- Make a roll with each chicken breast.
- Add salt and pepper on the outside.
- To prepare the quinoa crust, put into 3 different bowls the quinoa, the flour and the beaten egg.
- With clean hands, carefully dip the filled chicken into the egg, then into the flour, then again into the egg and finally into the quinoa. This will prevent it from breaking up during frying.
- Pour canola oil into a pan and cook the chicken breasts until crispy.
- Then wrap them in foil and place in the oven for 15 minutes at 190 °C.
- While the chicken is cooking, prepare the sauce. For this, put into a pan the cup of quinoa together with 2 cups of cold water. Cook on medium heat until the water has been absorbed and the quinoa is tender. Remove from the heat.
- Chop the onion and two garlic cloves.
- Put the chopped onion and garlic in a pan with olive oil and sauté.
- Then add the quinoa and cook in the pan, making sure everything combines well.
- Add the coffee and cocoa and wait until it thickens into a paste.
- Introduce the cream and stir well until it begin to boil.
- Then add the sugar, salt and pepper.
- Cut 3 slices from each chicken roll and serve with basil leaves and the sauce.

Tah-Chin with chicken

Chef Amir Pasha Sarvi (Iran)

Serves: **4-6**

Ingredients:

3 cups quinoa
1 cup yogurt
1 egg
1 tsp ground saffron
250 g chicken fillet
1 tbsp barberry (zereshk)
1 tbsp pistachio slices
1 medium onion
1 tbsp sugar
2 tbsp cooking oil
Salt
Black pepper

Preparation:

- Chop the onion and sauté in oil until slightly brown
- Add the chicken and sauté with the onion until it changes colour. Add 1 cup of water and bring to the boil. Then turn the heat down and let slowly boil until the chicken is cooked
- While the chicken is cooking, beat the yogurt until smooth
- Dissolve the saffron in half a cup of hot water.
- Add the saffron, salt, pepper and the egg to the yogurt and mix really well
- Wash and drain the quinoa. Place in a saucepan with water, bring to the boil, and cook until al dente. Drain.
- Pour oil and yogurt mixture into a non-stick pot. Add a thin layer of quinoa and flatten with the back of a spoon. Add a layer of chicken on top followed by another layer of quinoa. Again flatten the quinoa. Spread more spoonfuls of the yogurt mixture over the quinoa. Continue until there is no chicken, quinoa or yogurt mixture left.
- Cover the pot and cook for about one and a half hours on medium-low heat. Note that the longer tah-chin cooks, the thicker is the tah-dig (the delicious crispy layer of quinoa that forms at the bottom)
- When cooked, remove the cover and let cool for a few minutes
- Place an inverted large dish over the pot and turn the pot over. Gently tap the pot to loosen its content. This should drop in one piece onto the dish with the tah-dig on the outside
- Cook barberries with half a cup of water and 1 tbsp of sugar for 2 minutes.
- Sprinkle the dish with the cooked barberries and decorate with the pistachio slices

About the dish:

Traditionally tah-chin (Persian rice cake) is made with rice, chicken or beef and eggplant.

Quinoa and chickpea stuffed peppers with merquén

Maria José Coloma, Shelly Johnston and Ryan Gorczycki,
nutrition team, International Year of Quinoa FAO-RLC (US-Chile)

Serves: **4**

Ingredients:

4 large peppers
120 g quinoa
3 cups water
2 cups chickpea, soaked in water overnight
1 medium onion
2 garlic cloves
1 ½ cups mushroom, sliced
2 tomatoes
1 large carrot
1 tbsp merquén (smoked chili), or to taste
¼ tsp salt, or to taste
Olive oil, enough to fry
240 g grated cheese
1 cup fresh coriander (cilantro), chopped
½ cup basil, chopped

Tip:

The peppers can be served with a salad of romaine lettuce, tomato and grated carrot, mixed with sesame seeds, and a lemon juice and olive oil dressing.

Preparation:

- Preheat the oven to a high temperature
- First, the quinoa should be cooked in 3 cups of water. Once the water is boiling, lower the heat and simmer for about 15 minutes or until the water has been absorbed and the quinoa is tender
- In another pot, cook for 30 minutes the chickpeas that were soaked overnight. Mash when tender
- Cut the peppers lengthwise into halves and seed. Lay them on a baking tray, open side down. Place in the oven for about 10 minutes until the skin begins to soften
- Grate the carrot and chop the onion and garlic cloves
- In a pan with oil, gently fry the onion, garlic and carrot on medium heat. Add the mushrooms, merquén, salt and 2 tablespoons of coriander. Cook for 5 more minutes
- Seed and dice the tomatoes.
- In a bowl, combine the quinoa, chickpea paste, chopped basil and diced tomatoes with the preparation previously fried in the pan and mix until homogeneous
- Fill the halved peppers with the mixture and sprinkle with the grated cheese.
- Place the stuffed peppers in the oven and cook for 15 minutes, or until the cheese starts to brown
- Remove the peppers from the oven and let stand for 5 minutes. Serve hot garnished with the remaining coriander

Quinoa macaroni and cheese, accompanied with chicken and sun-dried tomato

Chef Rose Reisman (Canada)

Serves: **6**

Ingredients:

1 cup (250 g) quinoa
1 ½ cups water or low sa t chicken stock
175 g chicken breast, in pieces
2 tbsp flour
½ cup sun-dried tomatoes (previously rehydrated), chopped
½ cup (45 g) low fat feta cheese

For the sauce

1¼ cups 2% m lk
¼ cup chicken stock
2 tbsp flour
½ tsp D,jon mustard
Pinch of sa t and pepper
¾ cup (65 g) grated cheddar cheese
2 tbsp grated parmesan cheese

For the topping

⅓ cup breadcrumbs
2 tbsp grated cheddar cheese
2 tbsp grated parmesan cheese
2 tsp olive oi

Preparation:

- Preheat the oven to 200 °C
- In a small pot, add the quinoa and stock. Bring to the boil, cover and simmer for 15 minutes or until the quinoa is cooked. Set aside
- Meanwhile, roll the chicken in flour and cook in a pan with a l ttle vegetable oil. Cook for 3 minutes or until done. Add the quinoa, the sun-dried tomatoes and the feta. P ace the mix into a 23 cm baking tin
- To make the sauce, place in a saucepan the milk, stock, flour, mustard, salt and pepper Whisk until the flour s has comb ned we l with the other ingredients.
- Cook on low heat for 3 minutes or until the sauce is s ightly thickened, stirring constantly Add ¾ cup of cheddar and 2 tablespoons of parmesan. Whisk until smooth.
- Add the quinoa and mix.
- To make the topping, mix the breadcrumbs, grated cheddar, grated parmesan and olive oil
- Sprinkle over the chicken with quinoa and bake for 10 minutes or until the topp.ng browns.

Tip:

Chicken can be rep aced by pork, beef or shrimp Tofu can be used for a vegetar an d sh

Quinoa with roasted tomatoes, walnuts and olives

Chef Jenna Beaugh (US)
Serves: **4 (or 6** *as a side dish*)

Ingredients:

1 cup quinoa
3 cups water or vegetable stock
450 g cherry tomatoes
½ cup black olives, pitted and chopped
2 bay leaves
1 tsp cumin
½ tsp paprika
½ tsp salt or to taste
½ cup walnuts, chopped

Preparation:

- Wash the quinoa
- Preheat the oven to 205 °C
- Spread the walnuts on a foil-lined tray and toast for 3 to 5 minutes, or until golden brown. Remove and place in a bowl.
- Apply a little oil or cooking spray to the foil and place the cherry tomatoes on it. Roast the tomatoes in the oven for 30 minutes. They will start to burst and char. Remove the tomatoes from the oven and place in the same bowl as the walnuts.
- Combine the quinoa, bay leaves, paprika, cumin, water (or stock) in a pot on high heat. Bring to the boil, then reduce the heat and cook for 15 minutes, or until the quinoa has absorbed all the liquid.
- Add the quinoa to the mix of walnuts and tomatoes and add the olives.
- Season with salt to taste

Quinoa risotto with seasonal mushrooms

Chef Mauro Colagreco (France)

Serves: **4**

Ingredients:

6 tbsp white quinoa
6 tbsp red quinoa
20 medium mushrooms, in season and fresh
5 tbsp reggianito cheese, grated
20 reggianito slices, made with a peeler
½ cup vegetable stock
1 tbsp shallot, finely chopped
½ tbsp lard
2 tbsp extra virgin olive oil
1 garlic clove
1 sprig thyme
1 sprig rosemary
12 Andean small potatoes
20 leaves parsley
2 cups sunflower oil for frying
1 tbsp of salt

Preparation:

- Place water with a little salt in a large pot and bring to the boil. Wash the quinoa and cook for 10 minutes. When ready, drain well. Combine the red and white quinoa in a bowl and set aside
- In a saucepan with plenty of water, cook the washed whole potatoes. When cooked, remove from the water and peel while hot with a paring knife. Depending on the size, cut the potatoes into disks and set aside.
- Recover the potato skin and carefully dry with kitchen paper
- Pour oil into a small saucepan and heat (up to about 180 °C) Fry the potato skins for few seconds until crispy and drain on kitchen paper Set aside
- Clean the mushrooms and cut in half
- Pour a teaspoon of olive oil in a pan on medium heat and add the mushrooms and cooked potato discs, the garlic clove, thyme and rosemary Set aside and keep warm.
- In a pan melt a teaspoon of lard and lightly fry the finely chopped shallot without changing its colour
- Add the mixed quinoa, stir in the ½ cup of vegetable stock and moderately heat
- Stir in the grated cheese and the remaining lard and olive oil and stir well to emulsify. This process, known as "mantecatura", gives a creamy texture to our quinoa risotto
- To serve, place the quinoa risotto on the bottom of a bowl. Top with the mushrooms and browned potato disks to give bulk to the presentation. Garnish with 5 parsley leaves, the fried potato skin and a sprinkling of black pepper

DESSERTS AND DRINKS

Quinoa crispy bars

Source: Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia)

Serves: **10**

Ingredients:

2 cups toasted quinoa (quinoa pops)
2 tbsp grated coconut
5 tbsp dark raisins
2 tbsp almonds or walnuts
Dulce de leche

Preparation:

- Put the toasted quinoa into a bow (you can also use puffed quinoa)
- Mix with dulce de leche and almonds or walnuts until you have a uniform mixture
- Empty the mixture into biscuit moulds. Top with raisins and grated coconut.
- Flatten the mixture with a surface smaller than the biscuit mould
- Remove the crispy bars from the moulds and let dry
- Serve in the same way as 'turrones' (similar to nougat candy bars).

Tip:

The moulds should be washed each time you press a bar so nothing is left sticking to the sides

Morocho de dulce with quinoa

Chef Mauricio Armendaris (Ecuador)

Serves: **12**

Ingredients:

1 cup cracked morocho maize

¼ cup quinoa

13 ½ cups water

4 cups skimmed milk

2 cloves

2 units allspice

4 cinnamon sticks

1 white onion, with root and stem

½ cup sugar

Preparation

- Soak the morocho overnight. Drain.
- Wash and cook the quinoa in one and a half cups of water
- Meanwhile, cook the morocho in 12 cups of water until nicely tender. Drain
- Separately, boil the milk with the cloves, allspice, cinnamon sticks, white onion (with root and stem) and sugar
- Add the cooked morocho, half a cup of the already cooked quinoa, and continue cooking until the mixture thickens.
- Remove the onion, cloves, sweet pepper and cinnamon sticks
- Serve

Sweet quinoa kispiña

Source: Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia)

Serves: **8**

Ingredients:

2 cups quinoa flour
3 tbsp sugar
1½ cups boiled water
1 pinch cinnamon
2 tbsp oil
Raisins
Grated coconut
Barley or oat straw

Preparation:

- In a bowl mix the flour, sugar and cinnamon
- Add the oil and boiled water and mix until you have a dry uniform dough.
- With your hands, give the dough the shape you want and press in the raisins.
- Steam in a large pot with 4 cups of water
- When the water boils place the barley or oat straw on the water and the kispiñas on top. Be careful not to wet them with the water
- Steam for one hour or more, depending on the amount prepared

Quinoa and apple pudding

Chef Dolli Irigoyen (Argentina)

Serves: **8-10**

Ingredients:

½ cup quinoa

1 cup sugar

½ cup cream cheese (ideally low fat)

¾ cup milk (ideally skimmed)

1 tsp cinnamon

1 tsp lemon zest

4 eggs

For the cooked apples

2 green apples or pears, diced

2 tbsp sugar

For the caramelized sugar

1 extra cup sugar (approx.mately)

Preparation:

- Wash and cook the quinoa
- Cook the apples with the two tablespoons of sugar and 3 tablespoons of water in a covered pan for 15 minutes or until apples are tender
- Beat the eggs with sugar in a bowl. Stir in the cream cheese, milk, cinnamon, lemon zest and cup of sugar
- Add the quinoa to the preparation.
- Make a caramel with the extra sugar, caramelize a baking pan and pour in the mixture
- Cover with aluminium foil to prevent a crust forming
- Cook in bain-marie in an oven at 170 ° C for 50 minutes
- Let stand for a few hours to release the caramel
- Leave in the refrigerator one night before removing from pan.
- Serve with caramel sauce or whipped cream. You can also serve with plain yogurt.

Quinoa sponge cake

Source: Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia)

Ingredients:

1 cup quinoa flour
1 ½ cups white flour
½ cup cornflour
3 tbsp butter
½ cup sugar
5 eggs
1 orange
1 ¼ cups milk
3 tsp baking powder

Preparation:

- Beat the butter, sugar and egg yolks into a creamy mixture (put the egg whites in a separate bow.).
- In another bowl, place the white flour, quinoa flour, baking powder and grated orange peel
- Mix the ingredients and then slowly add to the previous mixture
- Add the juice of the orange and the milk, beating energetically
- Beat the egg whites until stiff and gently fold into the mixture
- Place the mixture into a previously greased and floured baking pan. Bake at 250 °C for 45 minutes

Lemon verbena quinoa tart with pomegranate sauce and quinoa wafer

Chef Frank Villablanca (Chile)

Serves: **6**

Ingredients:

4 tbsp quinoa
1 tbsp toasted quinoa
1 cup dairy cream
3 tbsp granulated sugar
2 eggs
4 tbsp flour
2 ripe pomegranates
4 leaves fresh lemon verbena
¼ tsp unflavoured gelatin
1 tsp butter
Cinnamon powder

Preparation:

- Wash and cook the quinoa.
- Hydrate the gelatin with two tablespoons of boiled water
- To prepare the pastry, in a bowl beat the egg yolks and two tablespoons of granulated sugar until the mixture thickens. Separately, beat the egg whites until stiff, then add the yolk mixture and gently add the flour with a sieve
- Remove a tablespoon of the batter and set aside
- The pastry needs to be thin, so place the remaining batter in a baking pan lined with floured baking paper. Bake for 15 minutes at medium heat (180 °C).
- Combine the removed tablespoon of batter with the toasted quinoa and bake thin sheets of the resulting mixture on baking paper for 8 to 10 minutes, to make the wafers
- In another bowl, whisk the dairy cream and a tablespoon of sugar until the cream thickens. Add to the previously cooked quinoa together with the freshly chopped lemon verbena leaves and the hydrated gelatin. Mix well
- Place in small moulds with pastry base. Refrigerate for one hour
- For the sauce, seed the pomegranates and mix the seeds or arils with a syrup made with a tablespoon of sugar and a tablespoon of water with cinnamon
- To serve, place the wafers on the dessert and the pomegranate sauce at the base

Tip:

Berries can be used if pomegranates are not available

Quinoa porridge

Source: FAUTAPO Foundation (Bolivia)

Ingredients:

1 cup quinoa
3 cinnamon sticks
3 cloves
5 tbsp cornflour
Sugar to taste
1 apple to decorate
1 strawberry to decorate
¾ litre of water

Preparation:

- Put the carefully washed quinoa in ¾ litre of water, together with the cinnamon and the cloves Cook
- When the quinoa is cooked, add the cornflour previously dissolved in cold water and resume cooking
- Pour the porridge into dessert bowls and let cool
- Decorate with apple and strawberry

Tip:

Fruits contain fibre which helps maintain good digestion. Choose to eat 5 portions of fruit and vegetable a day

Quinoa rocher

Chef Enrico Crippa (Italy)

Makes: **40-45**

Ingredients:

For the raspberry filling

250 g raspberry puree
4 g agar

For the caramelized quinoa

100 g puffed quinoa
(ideal y unsweetened)
133 g granulated sugar

For the coating

Whipped dairy cream
White chocolate
Dried raspberry powder
Matcha green tea (powdered)

Tip:

Mak ng a home-made pastry bag is very simp e. You on y need a p ast c bag to hold the m xture When the m xture is inside, tie the open end with string or e ast c to prevent the contents from leak ng out. Then cut one of the two bottom corners of the bag, tak ng care that the s ze of the hole corresponds to the intended use (in th s case, to insert the m xture into ba mou ds). Then simp y squeeze the mixture out of the bag through the ho e.

Preparation:

- Add the agar to the raspberry puree and bring to the bo l
- P ace in the refrigerator for about 3 hours
- B end the ge ed puree with an immersion (stick) blender or a blender, and with the help of a pastry bag squeeze the mixture into ball moulds and freeze
- To caramelize the puffed quinoa, put the sugar in a saucepan, cover with water and slowly heat, w thout stirring, until the granules begin to turn brown At this point, remove the pan from the heat and add the puffed quinoa Stir with a wooden spoon until the sugar crystal zes. Leave the quinoa to cool in a baking dish.
- When the quinoa is cool, sauté in a non-stick pan, on high heat, to caramelize the outer covering of sugar.
- Spread it over a baking tray to cool again
- Thread the raspberry balls with a toothp ck, dip them in the whipped cream and place them in the freezer
- Melt the white chocolate in bain-marie, stirring constant y Dip the raspberry and cream balls nto the chocolate to create a second coat.
- Before the chocolate cools, dip the raspberry balls in quinoa and then again in the white chocolate, shaking off any surplus. Place the balls in the refrigerator.
- When the chocolate is cool, remove the toothpicks and close the hole with a l ttle warm chocolate
- Dust half the rocher with raspberry powder and the other ha f with matcha tea. Ideal y, serve at 4 °C

Quinoa dessert with fruit

Source: Community of Laguna San Martín (Ecuador)

Ingredients:

½ cup quinoa
2 cups milk
½ cup sugar
Juice from 2 lemons
Chopped fruit

Preparation:

- Cook the quinoa and let cool
- Add the milk, sugar, and lemon juice. Stir with a wooden spoon until the mixture is creamy
- Add chopped fruit such as banana, orange, papaya and pineapple, or grated apple and sprinkle with ground cinnamon.

Tip:

You can add raisins or chopped nuts. The milk can be replaced with yogurt.

Quinoa with milk and guaviyu

Chef Laura Rosano (Uruguay)
Serves: **6**

Ingredients:

200 g guaviyu without seeds (or you can use blueberries, blackberries, strawberries or other fruits local to your area)
½ cup milk
300 g quinoa
50g sugar
100g almonds, toasted

For the guaviyu coulis:

200 g guaviyu without seeds (or you can use blueberries, blackberries, strawberries or other fruits local to your area)
250 g cup sugar

Preparation:

- Remove the seeds from the guaviyu.
- Heat a saucepan with the milk, the quinoa and half the guaviyu. Add the sugar when the mixture has boiled. Simmer for 30 minutes
- Serve in glass cups, add the rest of the guaviyu and a tablespoon of coulis per cup. Top with the ground almonds.
- For the coulis, remove the seeds from the guaviyu and process the fruit into a puree
- Put the puree and sugar into a pan and gently bring to the boil, stirring all the time. Remove from the heat and let cool.

Tip:

Any surplus coulis after preparing the dessert can be put into freezer bags and frozen. It can keep 6 months in a freezer and 10 days in a refrigerator.

Quinoa biscuits

Fuente: Irma Paca de Cano, Wiñay Warmi Association.
"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)

Ingredients:

600 g wheat flour
400 g quinoa flour
1½ cups milk
20 g baking powder
300 g butter
5 eggs
250 g sugar
1 cup cold boiled water

Preparation:

- Mix the wheat and quinoa flour and the baking powder on a table. Sift several times.
- Make a well in the flour and add the butter, the five eggs and the sugar dissolved in a cup of cold boiled water
- Mix and knead into a pliable uniform dough. Form bun shapes and leave to rest for 15 minutes in the refrigerator
- On a floured surface, roll out the dough into a thin layer ½ cm thick.
- Cut the dough into biscuit shapes. Place the biscuits on greased baking trays or pans.
- Brush the biscuits with two beaten egg yolks and
  bake at 180 °C for 20 minutes

Quinoa and kaffir lime cake with crème fraîche and puffed quinoa

Chef Morten Nielsen (Thailand)

Serves: **12**

Ingredients:

For the quinoa cake

70 g quinoa
30 g butter
1 vanilla pod
50 g cane sugar
2 eggs
½ tsp olive oil
100 g wheat flour
1 tsp baking powder
70 g almonds, ground
2 kaffir limes
5 kaffir lime leaves
1 tsp salt

For the puffed quinoa

50 g quinoa
Pinch of salt

For the topping

Crème fraîche

Tip:

A little organic honey can be added to the crème fraîche for additional sweetness

Preparation:

- Wash and cook the quinoa. Set aside.
- Melt the butter in a small saucepan and lightly brown. Set aside.
- Cut the vanilla pod lengthwise in two. Use the knife blade to scrape out the vanilla seeds. Mix the seeds with the sugar.
- Beat the eggs with the olive oil and mix with the vanilla sugar, flour, baking powder, ground almonds, browned butter and cooked quinoa.
- Squeeze the juice from the limes and grate the peel. Grate or finely chop the lime leaves. Add the kaffir lime zest, the grated or chopped lime leaves, the salt and the lime juice to the mixture.
- Put the mixture into a mould lined with baking paper.
- Bake in a preheated oven at 180 °C for approximately 30 minutes. Use a wooden skewer to see if the cake is baked. If the cake sticks to the wood, bake for 5 more minutes and repeat.
- For the puffed quinoa, begin by boiling the 50 grams of quinoa for 10 minutes and drain.
- Spread the cooked quinoa on baking paper and leave to dry for 3 to 4 hours in a dehydrator or oven at 60° C, until dry and hard.
- Fry the dried quinoa in hot oil (about 200° C) for 2 seconds or until the grains puff.
- Drain and let cool on a paper towel.
- To serve, place the cake on a plate. Add a little crème fraîche on the cake. Add the puffed quinoa on the crème fraîche.

Pasankalla quinoa pastries

Source: Luz Marina Ortega, Wiñay Warmi Association
"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)

Serves: **10**

Ingredients:

For the dough

1 kg flour
300 g butter
2 eggs
1 tsp baking powder
Salt
Sugar

For the filling

½ kg pasankalla quinoa flour
(or you can use normal quinoa flour)
2 chancaca balls (raw cane sugar)
Ground cinnamon
Clove
Dulce de leche blanco (manjar blanco)
100 g grated coconut

Preparation:

- Put in a bowl the flour, baking powder, butter, eggs, salt and sugar. Mix by hand.
- Add water until you have a dough. Let rest for about one hour
- Cook the quinoa in a pressure cooker with cold water for 25 minutes
- Separately, place in a pot with water the cinnamon, clove and chancaca, until this dissolves. Then strain.
- Add the cooked quinoa to the chancaca. Then wet with dulce de leche and grated coconut. Mix until uniform.
- After it has rested, roll out the dough and cut into squares to fold as an envelope
- Fill these with the quinoa mixture and bake at medium heat for 45 minutes or until golden brown

Tip:

Jam or dulce de leche can also be used as filling

Quinoa and apple porridge

Chef Claus Meyer (Denmark)

Serves: **12**

Ingredients:

100 g oats
400 ml water
1 tsp salt
50 ml apple juice
35 g quinoa
25 g butter

For the topping

200 g cane sugar
25 g butter
50 g quinoa
80 g diced apple

Preparation:

- Wash and cook the quinoa in salted water until it opens but is still al dente. Approximately 10 minutes. Remove the pot from the heat and leave the quinoa to cook in the retained heat.
- Put the oats, 400 ml of water, apple juice and salt in a pot and heat slowly
- When the ingredients of the porridge start to combine, add the cooked quinoa. Adjust the taste with butter and if necessary a pinch of salt.
- To make the topping, melt the cane sugar in a pan on low heat. Add the butter and quinoa, and stir
- Spread the mixture on baking paper and leave to cool
- When cool, cut into suitable pieces to use as a crunchy topping for the oat and quinoa porridge
- Serve in a bowl with the diced apples, cinnamon sugar and crunchy quinoa topping

Tip:

To prepare cinnamon sugar mix 1 tablespoon of granulated sugar with 1/4 teaspoon of ground cinnamon.

Quinoa cake

Fuente: Gloria Condori Yapo, Asociación Wiñay Warmi
"El camino de la quinua" cookbook, published by the Movimiento Manuela Ramos (Peru)

Ingredients:

1 kg quinoa flour
600 g butter
1 packet baking powder (20 gr)
4 tbsp vanilla extract
8 eggs
½ kg sugar
1 tin evaporated milk

Preparation:

- Separate the egg whites and beat until stiff
- Mix the butter, sugar and egg yolks into a cream. Add the quinoa flour and milk and mix into un form dough.
- Fold in the stiff egg whites, baking powder and vanilla
- Bake for one hour and twenty minutes at medium heat

Tip:

Eggs are a good source of complete protein. An egg contains approximately 6 grams of protein

Apple crumble

Chef Teresa Cutter (Australia)

Serves: **8**

Ingredients:

For the filling

6 med um apples
(approximate y 1 kg)
1 cup (250 ml) apple juice
1 tsp vanil a extract or 1 vanilla pod
¼ teaspoon ground cinnamon
Juice from ½ orange

For the crumble

1 ½ cups (120 g) quinoa flakes
½ cup (50 g) organic coconut flakes
½ tsp ground cinnamon
1 tsp vanil.a extract or 1 vanil.a pod
3 tbsp organic maple syrup
3 tbsp macadamia nut oi. or coconut oi
½ cup (50 g) walnuts or macadamia nuts (opt.ona)

Tip:

Add a handful of raspberries or blueberries to the app e Some of the apples can be rep aced with 2 to 3 peaches cut into segments

Preparation:

- Wash the apples, seed and cut into segments without peeling
- P ace the apples in a large thick-bottomed pot.
- Add the apple juice, vani.a, cinnamon and orange juice
- Cook on medium-low heat for 20 to 30 minutes, stirring occasiona ly, until the apples are very soft. Cover the pot for the first 10 minutes of cooking, which allows more liquid to be released from the apples and helps to keep them moist. Remove the lid for the last 10 minutes of cooking, if necessary, which he ps the excess moisture to evaporate
- To make the crumble, combine the quinoa with the coconut, cinnamon, vanil.a, maple syrup, oil and wa nuts in a food processor
- B end this mixture for a few seconds or until the ingredients are well m xed and crumbly. Taste and adjust as necessary.
- Preheat the oven to 160 °C.
- Place the app e mixture in a suitably sized baking dish and cover with the crumble
- Bake for 30 minutes or until the crumble is golden brown.
- Remove from the oven and serve a one or with custard, yoghurt or coconut cream.

Quinoa fritters (buñuelos)

Source: Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia)

Ingredients:

2 cups quinoa flour
3 cups white flour
1 cup milk
2 eggs
3 tbsp sugar
1 tsp salt
1 tsp cinnamon
5 tsp yeast
1 litre oil (for frying)

Preparation:

- In a bowl mix the quinoa flour, white flour, eggs, sugar, salt and cinnamon
- Add the milk and knead into a smooth dough.
- Dissolve the yeast in lukewarm water and mix into the dough. Let sit for 25 minutes
- Wet your hands in cold water, pinch off pieces of the dough to shape into fritters.
- Place the fritters in a pan with hot oil and fry both sides
- When cooked, serve with honey

Quinoa pancakes

Source: Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia) receta

Serves: **5**

Ingredients:

For the pancake mix

1 egg
1 pinch salt
1 tsp baking powder (2 g)
1 tbsp sugar (15 g)
1 tbsp oil
½ cup flour (63 g)
½ cup quinoa flakes (63 g)
1 cup milk or water, warm

For the filling

4 ripe bananas
2 tbsp sugar (30 g)
1 tbsp butter (15 g)

Preparation:

- In a bowl, mix the dry ingredients (flour, quinoa flakes, sugar, salt and baking powder)
- Then add the egg and milk to the dry ingredients. Beat the whole mixture until it becomes creamy
- Heat a pan on moderate heat and cover with a little oil. Then dry off the oil with a cloth. Ladle some of the batter into the pan to form a thin layer. Tilt the pan in different directions to spread the mix evenly
- Brown the pancake on both sides, flipping it over and pressing it with a spatula
- For the filling, peel the bananas and cut into thick slices
- In a pan heat the butter and add a thin layer of sugar. Caramelize both sides of the banana slices
- Place the slices on one side of the pancakes and lightly roll before serving

Quinoa tawa tawa

Source: FAUTAPO Foundation (Bolivia)

Ingredients:

2 cups wheat flour
¾ cup quinoa flour
6 tbsp sugar
2 tbsp butter without salt
2 tsp baking powder
2 eggs
Milk, as needed for the dough
Oil
Cane sugar syrup

Preparation:

- In a bowl put the flour, the sugar and the butter, and mix. Then add the eggs, the milk and the baking powder, and mix into a smooth dough

- Roll out the dough to a ½ cm thickness. Cut into triangles and fry in hot oil. Top with cane sugar syrup if you wish

Tip:

Remember to limit your intake of sugar, fats and salt. Opt for whole grain products

Quinoa bread rolls

Source: Hulda Salomé Salas Quispe.
"El camino de la quinua" cookbook, published by the Manuela Ramos Movement (Peru)
Makes: **35 rolls**

Ingredients:

1 kg wheat flour
½ kg quinoa flour
150 g sugar
4 g salt
10 g aniseed
20 g baking powder
150 g lard

Preparation:

- In a bowl mix the dry ingredients, the wheat flour, quinoa flour, salt, sugar, baking powder and lard, gradually adding water.
- Knead with your hands until the dough becomes elastic. Leave it to rest until soft (about 45 minutes)
- Then place the dough on a floured board. Divide into small portions of 10 grams and roll into balls on the floured surface
- Place the bread rolls on a baking tray. Coat with egg wash and quinoa flakes. Leave to rest for 2 hours in a warm area, covered with a cloth.
- Then bake at 250 °C for 8 minutes.

Juice of quinoa with apple and/or peach

Source: Foundation for Promotion and Research of Andean Products, PROINPA (Bolivia)

Serves: **16**

Ingredients:

1 cup quinoa flakes

12 cups water

5 medium green apples (or 8 medium peaches)

½ tsp ground cinnamon or one cinnamon stick

¼ cup cornflour

Sugar

Preparation:

- Peel the apples, cut in half and remove seeds.
- Boil water in a pot, add the sugar, ground cinnamon (or stick) and the apples. Leave to cook for 10 minutes
- Add the quinoa flakes, leave to boil for 8 more minutes, remove from the heat and let cool
- Extract and mince the apple halves
- Mix the minced apple with the rest of the juice.
- If you want a thicker juice, add ¼ cup of cornflour dissolved in cold water and cook for another 10 minutes

Quinoa with milk

Source: Patricio Víctor Bermúdez, recipes from Lluta Valley (Chile)

Ingredients:

½ cup quinoa ground and toasted
1½ cup milk
Brown sugar

Preparation:

- Bo the m lk and add the qu noa and sugar ts consistency should be like porridge.

Tip:

A dessert rich in proteins and calcium, he ping you to build healthy bones and teeth.

Quinoa drink

Source: Mariluz Ticona, Wiñay Warmi Association
"*El camino de la quinua*" cookbook published by the Manuela Ramos Movement (Peru)

Ingredients:

¼ k lo quinoa flakes
1 med um pineapple f nely d ced
3 cups sugar or more if needed
Pineapp e peel
Cinnamon
C ove

Preparation:

- Boil the pineapple peel with the clove and c nnamon n five l tres of water for 30 minutes
- Strain the mixture, add the quinoa flakes and cook for 30 more minutes.
- In a separate pan, put the diced pineapple with a cup of water and 3 cups of sugar. Cook for 10 minutes
- Add the cooked pineapp e to the pot with the cooked quinoa flakes and boil one last time for a few minutes. Check the sweetness
- Allow to cool and serve with ground cinnamon

Quinoa chicha

Chef Galo Villa (Ecuador)

Serves: **10**

Ingredients:

2 cups quinoa
3 litres water
5 sprigs hierba luisa (lemongrass)
3 sprigs lemon verbena
1 tbsp allspice
4 cloves
1 cup pineapple
3 cinnamon sticks
1 cup naranjilla
½ cup passion fruit juice
2 cups brown sugar

Preparation:

- In one litre of water, cook the quinoa, pineapple, naranjilla and passion fruit juice for one hour and let cool
- In another pot, boil two litres of water with the brown sugar, cinnamon, cloves, allspice, lemon verbena and hierba luisa.
- Once boiling, turn off the heat and cover the pot for infusion
- Stir the first preparation and sieve both preparations.
- Pour the resulting liquid in a covered container and let stand for 48 hours
- Serve with ice

Chefs

Rahul Akerkar

He says that he became a chef as he went along. This Indian learned about cooking as he worked in different restaurants while studying in New York for a master's in biochemical engineering. There he discovered his vocation in cooking. In 1989 he returned to India where he fully devoted himself to his new passion, and in 1999 opened the Indigo restaurant in Mumbai, which offers Mediterranean dishes with local flavours and styles. Indigo has received a series of international recommendations, including 28th ranking in the 2013 list of "Asia's 50 best restaurants" organized by *Restaurant Magazine*. Akerkar is currently working on a recipe book.

Mauricio Armendaris

This chef is convinced that Ecuador has an extremely rich gastronomy and has been actively retrieving, promoting and internationalizing its flavours in a more modern format. He has written several books with this in mind, including *Mishki Mikuna, el sabor de Ecuador, La cocina del Ecuador and Panes y postres del Ecuador.* This enthusiasm spurred him to become one of the founders of the Association of Chefs of Ecuador, of which he is currently President, and to participate as director in the National Plan for the Development of Ecuador's Culinary Heritage.

Jenna Beaugh

Chef and seasoned blogger, her current passion for writing recipes started from her obsession with cookbooks when she was only 10 years old. She could spend hours leafing through cookbooks or watching her mother cook. Jenna is the creator of the site *Eat, Live, Run*, where she posts recipes and stories of travel and life. She is also the author of the book *White jacket required*.

Matthew Boland

He is one of the best known chefs of Aruba and is in charge of the menus of the various restaurants of the Westin Aruba Beach Resort & Casino, where he has had the privilege to cook for participants at the Pan American Conference on Obesity (PACO) During the course of his career he has worked with the famous New York chefs Daniel Boulud and Tom Valenti. A key feature of Boland's cuisine is his insistence on fresh produce, preferably sourced locally. When not working in the kitchen of prestigious restaurants, this chef has presented television programmes, some specifically for children

Joseph Brozovich

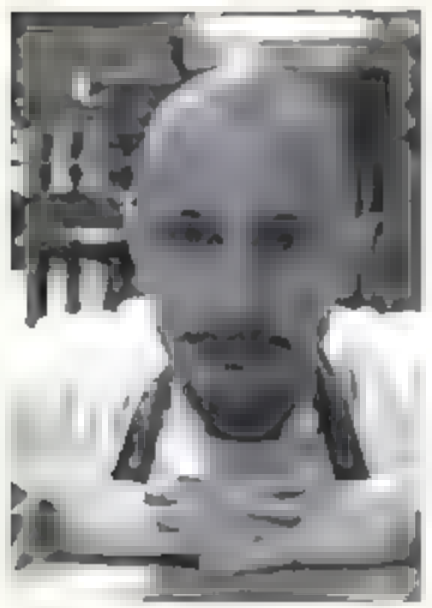
Bolivian chef. He began his career in Peru, in the Cordon Bleu of Lima, where he witnessed that country's gastronomic revolution, an experience that inspired him. After finishing his studies he worked for a while in Bolivia and attended internships in Denmark. After returning from Europe, he and three partners decided to set up the restaurant Ají Gustro, which seeks to highlight Bolivian flavours and ingredients and is already well known in La Paz. This year he was also given responsibility for the inaugural luncheon for the International Year of Quinoa, held at UN headquarters in New York and attended by President Evo Morales and UN Secretary-General Ban Ki Moon.

Mauro Colagreco

Argentine by birth, this chef has forged his career and fame in France. After working in prominent French restaurants for almost five years, in 2006 he settled in Menton, on the French Riviera, with his own restaurant, Mirazur. His venture was a resounding success. He was recognized in France by the Gault et Millau guide in 2007 and 2009. He is also known internationally. His restaurant today has two Michelin stars and in 2013 was selected as one of the 28 best restaurants in the world in the "World's 50 best restaurants" list produced by the *Restaurant Magazine*
Photograph by: Per-Anders Jorgensen

Maria José Coloma, Shelly Johnston y Ryan Gorczycki

Nutritionists and members of the team working on this cookbook. Maria José Coloma (in the photo) is Chilean and is currently working as a nutrition consultant with the FAO Regional Office for Latin America and the Caribbean. Shelly Johnston and Ryan Gorczycki are young US citizens on internships as members of the International Year of Quinoa team.



Enrico Crippa

He is one of today's best known Italian chefs. His career began under the influence of the best European chefs: Gualtiero Marchesi, Christian Willer, Ghislaine Arabian, Antoine Westermann, Michel Bras and Ferran Adrià. After spending a few years in Japan, an experience that was crucial for his cooking, in 2005, he and the Ceretto family opened the Piazza Duomo in Alba, Italy. This restaurant is internationally renowned. It has three Michelin stars and in 2013 the *Restaurant Magazine* classified it among the 41 best restaurants in the world.

Teresa Cutter

She is one of Australia's leading authorities on healthy cooking and is founder of the company The Healthy Chef. Teresa is a chef trained in traditional French cuisine, a nutritionist and a fitness trainer. She has written five books on healthy cooking, the most recent being *101 Ways to Lose Weight and The 80/20 Diet*, both with successful sales on iTunes. Teresa writes columns with recipes and nutritional information for the *Sun herald* and the magazines *Women's fitness, Men's fitness and House & garden*, and has appeared on numerous cooking segments on television.

André Chiang

A young French trained Taiwanese chef now established in Singapore, Andre Chiang's cuisine has been influenced by his many years spent in the kitchens of French nouvelle cuisine maestros. At Restaurant ANDRE, the cuisine reflects Chef Andre's culinary principle - Octaphilosophy - based on eight characteristics: Unique, Texture, Memory, Pure, Terroir, Salt, South and Artisan. Namely 8 dishes thoughtfully combined to engage all the senses. Since its opening in 2010, Restaurant ANDRE has been celebrated by many including The New York Times. In 2013, the restaurant achieved position 38 in the World's 50 Best Restaurants list 2013 by *Restaurant Magazine* and has been proclaimed one of the best restaurants in Asia.

Quique Dacosta

This Spanish chef is considered to be in the vanguard of Spanish cuisine. His Mediterranean cooking starts from tradition but then breaks new ground through research and creativity. His restaurant Quique Dacosta has received a stream of awards, including three stars from the *Michelin Guide* and features in the list of "World's 50 best restaurants", produced by the *Restaurant Magazine*. He has also been awarded an honorary doctorate in fine arts from Miguel Hernández University. Part of his art is recorded on a CD-ROM and in three books, one of which *Arroces contemporáneos* has just been issued in fourth edition.

Débora Fadul

Young chef from Guatemala. She is owner of the catering company Chef de Mon Coeur, which services some of the principal companies of the country. Her policy is to prepare the dishes when they are about to be consumed, with fresh ingredients. Debora has written columns for various Guatemalan media, including *El Periódico*, the magazines *Look magazine*, *Mis hijos y yo* and *Salud y vida*. She also presents the *Cosina Kreativa* segment of the *Matutino express* programme on Guatemala's Canal Antigua.

Dolli Irigoyen

Chef and television presenter recognized in her native country, Argentina, and throughout Latin America. Dolli has produced several television programmes of Elgourmet.com and has published the books *Dolli cocina para todos* and *Dolli Irigoyen en su cocina*. She has received countless awards during the course of her career, notably the Santa Clara de Asís and the Martín Fierro for the best cookery cable programme on Argentine television.

Citrum Khumalo

South African chef, media personality and one of the public faces of South African cuisine in the world. Although he started from the bottom, in the cleaning staff of a restaurant, he rapidly rose through the kitchens. He now has his own catering company, a programme on the Jozi FM radio station and is widely recognized after conducting cookery programmes such as *Chef in my kitchen, Whip the chef* on SABC 2 channel and *Boy meets grill* on SABC 1. He is founder of the Culinary Arts Association of South Africa (C.A.A.S.A) and is currently its President. He is also the president of African Chefs united (A.C.U).

Juliana Lopez

Argentine chef, presenter of cookery programmes and an authority on healthy organic food. She began her career at the age of 19 years, under Francis Mallmann, before travelling the world, which included a stint at the acclaimed River Café restaurant in London. Juliana made a number of programmes on El Gourmet, including *Naturalmente Juliana, La Huerta en tu casa, Good food* and *Ligero y liviano*. She is also the author of the cookbooks *Mi primer libro de recetas, Recetas compartir* and *Gatturriquisimo*.

Chef McDang

His name is Mom Luang Sirichalerm Svasti, born into the royal family of Thailand but known in Asia as Chef McDang. His education and early career took place in the US In 1993 he decided to return to his country of birth where he rapidly became a public face. There he published books such as *The principles of Thai cookery and Delicious Food from McDang's Kitchen* and made various television programmes, the last being the *McDang show* which is broadcast on 9 MCOT channel. This chef also writes columns for the Daily News Thailand and CNNGo. His wealth of experience has earned him the title of Ambassador for Thai Cuisine.

Morten Nielsen

Of Danish nationality, this chef is a self-confessed lover of Thai cooking. His relationship with this cooking began in 2004, when he worked in the famous restaurant Nahm in England, and was consolidated in 2007 when he joined the restaurant Kiin Kiin, in Denmark, as head chef. In 2011, he finally travelled to Thailand and became head chef of Sra Bua by Kiin Kiin, a restaurant that offers Thai-inspired cuisine with a modern flair, and that was classified as one of the 29 best in Asia in the"Asia's 50 best restaurants" list produced by *Restaurant Magazine*

Alfredo Oropeza

Chef famous in Mexico and the rest of Latin America, where he promotes healthy cooking and wholesome habits. This cause is reflected in four best sellers, including *La nueva cocina saludable del Chef Oropeza,* and in his television programmes. Oropeza has worked with the US Food Network, the Elgourmet.com channel and for four years with Televisa's Canal de las Estrellas (Channel of the Stars). He is currently presenting his own programme *Chef Oropeza en casa*, broadcast through Unicable.

Matías Palomo

Mexican by birth but a nomad for much of his professional life. His early days as chef took him to famous kitchens, such as those of the restaurants Arzak and El Bulli in Spain, and Daniel in New York. In 2006 he arrived in Chile and opened the restaurant Sukalde, with a menu that revives forgotten or little known Chilean products. *The Food & wine* magazine recommended Sukalde in its Go List for the year 2008 and *Forbes* magazine praised its gastronomy in 2011. Matías also has wide experience in television: he presented *Se Cocina al fin del mundo and varietal* (Canal 13 cable).

Amir Pasha Sarvi

Iranian chef. His love for cooking began at home in a rural area 40 kilometres from Teheran, where he watched his grandmother and mother cook. This love was so strong that he decided to give up his computer studies and set up the catering company Pasha Food Studio in Teheran. This chef likes to use traditional Iranian ingredients sourced directly from the countryside. Pasha is currently filming a television programme in which he uses traditional ingredients in a modern and healthy style of cooking.

Juan José Peralta

Bolivian chef with an extensive career. He was charged with catering for the President of Bolivia, Evo Morales, during the launch of the International Year of Quinoa in New York, US. He began in the kitchen under the auspices of his father a former hotel chef who worked in many of the hotels of La Paz. After working in various restaurants and cafeterias of La Paz, including the La Paz Tennis Club and Bistrot Alliance Française, Juan José concentrated on culinary training; first in the Commercial Technical Institute of La Paz and then with the Programme of Productive Technical Education of Uyuni, Potosí, financed by the Fautapo Foundation.

Adolfo Perret

Executive chef of the Punta Sal restaurants and one of the public faces of Peruvian gastronomy in the world. He has been appointed to prepare delicacies for high-level political meetings and has participated in television programmes with cookery segments, such as those of the Utilísima channel or in *Realiza tu sazón con Inca kola, Hola Perú, and Hombres trabajando para ellas*. He is currently director of the Peruvian Society of Gastronomy (APEGA).

Rose Reisman

She is a promoter of healthy food and lifestyle. This Canadian author has written 18 books with more than two thousand recipes and information on nutritional trends, weight control and the prevention of chronic disease. She participates in radio and television programmes and writes columns in news media such as *The Huffington post Canada*. She is also owner of the company Rose Reisman Catering and Personal Gourmet.

Joan Roca

He is the eldest of the three Spanish brothers who founded the famous restaurant El Celler de Can Roca, considered the best in the world in 2013. Joan trained under big names of world cuisine such as Ferran Adrià, Santi Santamaría and George Blue. The dishes produced by the Roca brothers are a combination of Catalan tradition and modern culinary techniques that seek to exhilarate their customers.

Laura Rosano

What inspires and moves this Uruguayan chef, member of the Slow Food movement, is cooking with local products and methods, organic foods and flavours that are as natural as possible. She started in gastronomy in Sweden and Holland. She is currently co-director of Verde Oliva, a company specialized in the design of workshops on food education and in research and promotion of regional cooking and native fruits. Laura is also the author of the *Recetario de frutos nativos del Uruguay* and one of the chefs previously collaborating with the cookbooks of Chefs Against Hunger.

Lorenzo Rosso

Born in Italy, this man is in love with Thailand. He is married to a Thai and is currently executive chef of the Hotel Millennium Hilton Bangkok. He started his career in Asia as executive chef of the Hotel Sofitel Raja Orchid Khin Kaen in 1997. The moved to the Hilton Hua Hin Resort & Spa in 2000 and took up his present position in 2005.

Chris Salans

The style of this chef reflects a combination of cultures. The son of a French mother and a North American jewish father, but his heart lies in Indonesia where he settled and opened a restaurant called Mozaic. His cooking has received many awards. He is recognized as the best restaurant in Indonesia, is listed in the "Asia's 50 best restaurants" list of *Restaurant Magazine*, and was classified as fifth best restaurant in Asia by the *Miele Guide*

Flavio Solórzano

Specialized in Peruvian cuisine, pastry and artisanal ice cream, this chef is known for having drawn the world' attention to Peru's cuisine. Solórzano began in his mother's restaurant, El Señorío de Sulco, where he continues to delight his customers and which he and his brothers have elevated to one of most prestigious of Peru. This chef is also known on cookery segments of Peruvian television. He is a founding member of the Peruvian Society of Gastronomy (APEGA) and a former collaborator of Chefs Against Hunger.

Darwin Torres

Born in Venezuela, but with cookery experience gained in the Caribbean, in Puerto Rico and then Aruba, where he has worked for 16 years. He has been chef in places like the restaurants Sunset Grille del Radisson Aruba and Mr. Jazz. He was assistant chef in the Hotel Riu Palace and is now assistant to the executive chef of the Westin Aruba Beach Resort & Casino. The type of cuisine that attracts him most is fusion.

Takahiro Tozawa

When a Peruvian friend introduced this Japanese chef to quinoa in 2007, the grain was unknown in his country, nor was there much information on it on the internet. His passion for quinoa and its benefits led him to create a web site in Japanese, with information and recipes using ingredients available in Japan

Claude Troisgros

French by birth, son of the famous Pierre Troisgros, this chef has lived for more than 30 years in Brazil, which as given his cooking a unique blend of Brazilian flavours and ingredients, such as cashew and açai, with classics such as foie gras, caviar and souffié. Troisgros is known in Brazil through his television programme *Que marravilha!*, broadcast on Canal GNT, and his most famous restaurant, the Olympe in Rio de Janeiro which has made him world renowned, was recognized as one of the best 50 restaurants of Latin America, according to *Restaurant Magazine* Troisgros has been nominated 'Chef of the Year' by leading Brazilian magazines such as *Veja, Gula* and *Guia Quatro Rodas.*

Thomas Troisgros

The fourth generation of a family of chefs, the son of Claude Troisgros and grandson of Pierre Troisgros. He has been cooking since he was 10 years old. He began in France in the family kitchens and then under Daniel Boloud in New York, and two of Spain's most famous chefs, Andoni Aduriz and Juan Mari Arzak. He and his father currently run the restaurants Olympe, CT Trattorie, Brasserie CT and CT Boucherie, all in Rio de Janeiro. In 2009, Thomas was awarded a prize as ' Revelation Chef' by the Brazilian magazine *Veja Rio*.

Malika van Reenen

Executive chef of the Signal restaurant, in Cape Town, South Africa, where she has worked for the last five years. Her roots run deep in Cape Malay culture and traditions, which have been present in Cape Town for centuries. With Malika in charge of the kitchen, the Signal restaurant has gained prominence in Cape Town, winning awards such as the Master of the Trade Routes and the Best Dish Award at The Taste of the Cape Town.

Rubén Vega

Executive chef of the Hotel Palace Guayaquil of Ecuador. He has worked as advisor to various hotel corporations including Hilton, Sheraton and Marriott. He has also taught at the University of Guayaquil and at the School of Gastronomic Sciences of the Universidad de Especialidades Espíritu Santo (UEES) of Guayaquil.

Galo Villa

Ecuadorian chef specialized in bakery and chocolate making. He teaches pastry and chocolate making at the Cruzada Social in Riobamba. He is academic director of Río Gourmet Alta Cocina y Hotelería and general manager of the Río Gourmet group. He won silver medal of the Latacunga culinary cup 2012 and the Riobamba culinary cup 2013

Frank Villablanca

This Chilean was one of the first members of the Chefs Against Hunger alliance and is one of the most active, contributing delicious creations to two of its cookbooks. Frank has vast experience of the culinary diversity of Chile's regions and is a passionate promoter of Chilean gastronomy, representing the national cuisine in assorted Latin American culinary festivals. His style of cooking is simple and minimalist, an approach that he has instilled in the restaurants and hotels in which he has worked, including the Hotel Radisson of Huechuraba and the Hotel Manquehue.

Carlo von Mühlenbrock

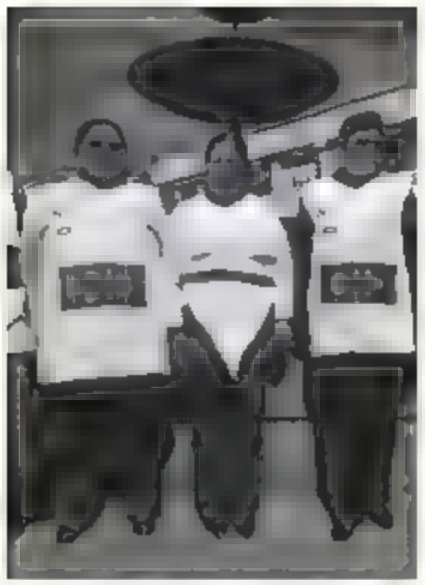
He is perhaps one of the most popular chefs on Chilean television, a champion of healthy eating and one of the promoters of world awareness of Chilean produce and gastronomy. He has worked on different Chilean television channels and today reaches into Chilean homes with the programme *Carlo cocina* on CNN Chile. This chef has written several books, including *Cocina fácil* and *Manos del sur*. He is also a partner of the Restaurante Osadía and one of the public faces of the Chilean Government's Elige Vivir Sano (Choose Healthy Living) campaign that seeks to promote healthy lifestyles.

Communities

PROINPA Foundation (Bolivia)

The Foundation for Promotion and Research of Andean Products, PROINPA, is a non-profit science and technology institution that has three central objectives to benefit agricultural producers and society as a whole: to promote the conservation and sustainable use of genetic resources; to contribute towards food sovereignty and security; and to foster the competitiveness of agricultural sectors of national priority.

The recipes received for this cookbook result from training given by PROINPA and the McKnight Foundation on "diversification of uses of quinoa and cañahua based on their flakes", and from the recovery of traditional forms of preparation in partnership with farmers of the communities of Jalsuri, Contorno Letanías, Charahuayto, Callisaya, Canavíri, Chojasivi, Quiripujo y Lacaya, Coromata Media, Cachilaya, Titijoni, Santiago de Okola and Cariquina Grande.



Wiñay Warmi Association (Peru)

Wiñay Warmi, which means "growing women" in Quechua, is the name chosen by 15 women from the Puno region who decided to form a gastronomic association dedicated to quinoa in the year 2007. This group emerged from training given through the Project to Strengthen the Economic Participation of Rural Women in Puno, executed by the Manuela Ramos Movement and financed by Andean Development Corporation (CAF) and Italian Cooperation. Some 60 women were involved in the training and 15 of these decided to set up a business activity based on this Andean grain.

The partners of Wiñay Warmi shared their know-how and produced a cookbook entitled "El camino de la quinua", published by the Manuela Ramos Movement. In this way Así Wiñay Warmi managed not only to earn income for its members, but also converted them into ambassadors for the promotion of this golden grain.

FAUTAPO Foundation (Bolivia)

The Foundation for Development, FAUTAPO, is the institution responsible for coordinating and facilitating the implementation of the COMPA-SUR programme whose primary objective is to support the production of organic royal quinoa of the southern highlands of Bolivia. Its intervention includes the promotion of this emblematic product of Bolivia at national and international level in order to increase its consumption. Culinary experiences have been revived for this purpose to demonstrate the properties of quinoa and its versatility in the preparation of food.

Community of Laguna de San Martín (Ecuador)

Laguna de San Martin is a community in the canton of Riobamba, parish of Quimiac, in the province of Chimborazo. Its inhabitants are farmers producing traditional Andean foods such as oca, mashwa, melloco, fava bean and especially quinoa. They also grow potatoes and pasture, raise guinea pigs and breed dairy cattle.

Community of Guadalupe (Ecuador)

Guadalupe is a community in the canton of Riobamba, situated at 3400 masl at the foot of grasslands in the parish of San Juan, in the province of Chimborazo. Its inhabitants are farmers producing traditional Andean foods such as fava bean, oca, mashwa, melloco, potato and non traditional commodities such as barley. They also grow pasture and raise dairy cattle.

Glossary

Agar: Vegetable gelatin made from seaweed.

Alholva (*Trigonela foenum-graecum*): Plant from southeast Asia whose leaves and seeds are used in cooking because of their aromatic properties

Andigena potatoes (Papines andinos) (*Solanum tuberosum subespecie andigena*): The Andean potato is a collection of cultivars native to the Andean region of South America. These potatoes have different shapes and attractive colours. The small size tuber is known as 'papín'.

Annatto oil: A condiment made from the seeds of the *Bixa Orellana* plant. It has an intense orange, almost red, colour. It is made by heating two tablespoons of seeds in a cup of oil until they begin to bubble.

Avocado: Fruit of the *Persea Americana* plant.

Basmati: Long-grain rice grown in India and Pakistan.

Barberries: Fruit of the *Berberis vulgaris* plant. These berries are an important ingredient in Iranian cooking.

Brunoise: Type of vegetable cut, consisting of small cubes with sides of about 5 millimetres.

Bulgur: Also known as bulghur, burghul and cracked wheat. This is a food obtained from precooked cracked wheat. It is common in the Middle East and North Africa.

Cane honey (miel de caña): Cane sugar syrup.

Cayenne pepper: Powder of dried chillies. Can contain powder of one or more species of chilli.

Chive (Allium schoenoprasum): This plant has a smaller bulb than an onion. Its stem is used.

Chuño: Powder obtained from the dehydration and subsequent grinding of a potato.

Coloured lard: Pork lard spiced with paprika and other varying ingredients, such as meat, oregano, bay leaf and vinegar.

Coulis: This is a type of sauce from French cuisine Its terminology has changed as cooking has changed: what was originally the thickened juice of cooked meat giving body and flavour to sauces has also become a sweet or savoury sauce or puree of fruits or vegetables, produced through cooking, marinating etc. Today, the most popular coulis are made from fruit and are used to accompany desserts, such as the traditional strawberry or red fruit coulis served with cheesecake and vegetable coulis (also fruit) served with meat and fish.

Crème fraîche: Dairy cream with an acidic taste It is less bitter and has more fat than "sour cream" It is made by injecting *lactobacillus* cultures into unpasteurized light cream.

Fennel (*Foeniculum vulgare*): Aromatic herb used in gastronomy

Glaze: A sweet or savoury substance applied as a glossy decoration

Green bean: Pod of the *Phaseolus vulgaris* plant. It is flat and elongated, contains seeds and is normally eaten cooked.

Guaviyu: Fruit of the *Myrcianthes pungens* tree. The berries are small, violet and with one or two large seeds The flesh is greenish yellow, firm, very sweet and juicy

Jaggery: coffee-coloured block of unrefined sugar made from sugarcane juice consumed in Asia and Africa. Similar to panela in appearance but different in taste.

Kaffir lime: Fruit of the *Citrus hystrix* tree, commonly used in southeast Asian cuisine. Its juice and skin are used.

Kumquat: Small citrus fruit with an edible skin.

Leek (Allium ampeloprasum var. Porrum): This vegetable has a bulb like garlic but larger.

Maple syrup: Syrup made from maple sap Commonly used in US and Canada

Maracuja (passion fruit): Fruit with a yellow, orange or violet skin grown in much of America.

Masala: A term used in south Asian countries to refer to a mix of spices The mix can be dry or a paste.

Matcha green tea: Ground green tea.

Microgreens: Vegetables with approximately two weeks of life produced in sterile soil and a container with drainage. Their growth requires sunlight, good air circulation and continuous irrigation. The most common vegetables grown this way are kale, spinach, cress, rocket and broccoli.

Morocho maize: Dried maize.

Naranjilla: Fruit of the *Solanum quitoense* plant, typical of the Andean region. Its peel is yellow, orange or brown and is covered with hairs. It has an acidic taste and is used in juices, jams and desserts.

Panela: In America this is also known as raspadura, atado dulce, chancaca, empanizao, piloncillo, tapa de dulce, papelón and panocha. It is a solid piece of coffee-coloured unrefined sugar normally obtained from cane sugar. It is very common in South America, India and Pakistan.

Paprika: Red powder resulting from the drying and grinding of specific varieties of red peppers.

Pearl onion (*Allium proliferum*): Small sweet onion, also known as cocktail onion.

Pepper: Fruit of the shrub *Capsicum annuum var. Annuum*

Racacha (*Arracacia xanthorriza*): Andean plant whose root is eaten

Rawas (*Eleutheronema tetradactylum*): Also known as rahu, rehu, roí, rui or rou. This is a white fish popular in India, Thailand and Pakistan.

Rocket (*Eruca sativa*): Vegetable normally consumed as a salad

Shallot (*Allium ascalonicum*): Plant similar to the onion but with a mild sweet bulb, between onion and garlic.

Spring onion (*Allium fistulosum*): A plant similar to an onion with a small bulb

Tabbouleh: A salad of Arab origin based on cracked wheat

Vietnamese coriander (*Persicaria odorata*): Common herb in southeast Asia whose leaves are used in cooking. It is similar to mint in appearance and smell

Wakame: Edible seaweed used in soups and salads.

Conversion tables

OVEN TEMPERATURES

Very low	200	95	0
	225	110	1/4
	250	120	1/2
Low or slow	275	135	1
	300	150	2
Warm	325	165	3
Moderate	350	175	4
Moderately hot	375	190	5
Hot	400	200	6
	425	220	7
Very hot	450	230	8
	475	245	9

EQUIVALENTS FOR DIFFERENT TYPES OF INGREDIENT

1	140 g	150 g	190 g	200 g	240 ml
3/4	105 g	113 g	143 g	150 g	180 ml
2/3	93 g	100 g	125 g	133 g	160 ml
1/2	70 g	75 g	95 g	100 g	120 ml
1/3	47 g	50 g	63 g	67 g	80 ml
1/4	35 g	38 g	48 g	50 g	60 ml
1/8	18 g	19 g	24 g	25 g	30 ml

LIQUID INGREDIENTS BY VOLUME

1/4 teaspoon				1 ml	
1/2 teaspoon				2 ml	
1 teaspoon				5 ml	
3 teaspoons	1 tablespoon		1/2 fluid oz	15 ml	
	2 tablespoons	1/8 cup	1 fluid oz	30 ml	
	4 tablespoons	1/4 cup	2 fluid oz	60 ml	
	5 1/3 tablespoons	1/3 cup	3 fluid oz	80 ml	
	8 tablespoons	1/2 cup	4 fluid oz	120 ml	
	10 2/3 tablespoons	2/3 cup	5 fluid oz	160 ml	
	12 tablespoons	3/4 cup	6 fluid oz	180 ml	
	16 tablespoons	1 cup	8 fluid oz	240 ml	
	1 pt	2 cups	16 fluid oz	480 ml	1litre
	1 qt	4 cups	32 fluid oz	960 ml	
			33 fluid oz	1000 ml	

DRY INGREDIENTS BY WEIGHT

To convert ounces to grams, multiply the number of ounces by 30.

1 oz	1/16 lb	30 g
4 oz	1/4 lb	120 g
8 oz	1/2 lb	240 g
12 oz	3/4 lb	360 g
16 oz	1 lb	480 g

Nutritional value

Details of nutritional value of quinoa

Quinoa has gained world recognition for its nutritional value, most notably for the quality of its proteins. In addition to the quinoa seed, the quinoa leaf is highly nutritious and often compared to spinach for its similar flavour and high vitamin A content (Koziol, 1992). However, this document will focus on the quinoa seed, labelled as 'quinoa' in the rest of this text, which is the most available part for consumption. The quinoa seed is unique in that it is eaten in a manner similar to a grain. It is often either cooked and added to soups, or made into flour to be used in bread, drinks or porridges. The following review will cover the nutritional value of quinoa's proteins, carbohydrates, lipids, minerals and vitamins.

Prior to reviewing quinoa's nutrition, it is important to examine the basics of the quinoa seed structure as it affects quinoa's nutritional qualities. The inner part of the quinoa seed is called the perisperm and is rich in carbohydrates, while the outer parts, called the embryo and endosperm, are rich in proteins, lipids, and minerals (Prego et al, 1998). The quinoa seed is surrounded by a cover called a pericarp, which contains saponins. While the saponins in quinoa are not considered toxic, they must be removed during processing to reduce quinoa's bitter taste (Schlick and Bubenheim, 1996). Quinoa's saponin quantity often depends on the variety, with varieties low in saponins labelled as sweet, and varieties high in saponins labelled as bitter (Mastebroek, 2000).

Quinoa is remarkable for its protein content amongst other crops. As shown in Table 1, quinoa (16.5 g) is generally higher in total protein than maize (10.2 g) or rice (7.6 g), similar in quantity to wheat (14.3 g), and lower in protein than beans (28.0 g) per 100 grams dry weight.

Quinoa is also a good source of polyunsaturated fats, dietary fibre, iron, magnesium and zinc, making it a nutritious food to include as a part of a balanced diet.

***Table 1*: Macronutrient contents of quinoa and selected foods, per 100 grams dry weight.**

	Quinoa	Bean	Maize	Rice	Wheat
Protein (g/100g)	16.5	28.0	10.2	7.6	14.3
Total Carbohydrate (g/100g)	69.0	61.2	81.1	80.4	78.4

Source: *Koziol (1992)*

While quinoa is generally considered to be a nutritious food, it is important to note that, similar to any crop, quinoa's nutrient quantities depend on the soil and cultivation conditions in which it is grown, along with the variety. For example, Koyro and Eisa (2008) found that quinoa's protein content was higher and its carbohydrate content lower as the soil salinity concentration increased, with the protein increasing from 11.7 to 15.9 percent of its dry weight. In addition, a study by Miranda et al (2012) of six quinoa ecotypes from three geographical areas of Chile found the calcium content to range from 77.1 to 211.2 mg per 100 grams dry weight.

Proteins

When compared to other plant foods, quinoa is generally higher in total protein than most grains, while lower in total protein than most legumes (Koziol, 1992). Miranda et al (2012) studied six quinoa ecotypes in three different biogeographical regions of Chile and found the total protein in quinoa to range from 11.3 to 16.1 percent of its dry weight. In addition to quinoa's total protein, it is also important to analyse quinoa's essential amino acid content and the availability of its proteins to verify its overall protein quality.

One of the important nutritional qualities of quinoa is its mix of essential amino acids. There are eight amino acids considered to be essential for both children and adults. When compared to the FAO's recommended scoring pattern for essential amino acid requirements per 100 grams of protein for 3 to 10 year olds, as shown in Table 2, quinoa on average exceeds the recommendations for all eight. In contrast to quinoa, most grains are low in the essential amino acid lysine, while most legumes are low in the sulphuric amino acids methionine and cysteine (Koziol, 1992).

***Table 2*: Comparison of essential amino acid profiles of quinoa and other selected crops with the FAO recommended amino acid scoring pattern for 3 to 10 year olds (g/100 g protein)**

	FAO [a]	Quinoa [b]	Maize [b]	Rice [b]	Wheat [b]
Leucine	6.1	6.6	12.5	8.2	6.8
Methionine [c]	2.3	5.3	4.0	3.6	3.7
Threonine	2.5	3.7	3.8	3.8	2.8
Valline	4.0	4.5	5.0	6.1	4.4

a Amino acid scoring patterns for 3 to 10 year old children, adapted from FAO (2013), "Dietary protein quality evaluation in human nutrition".
b Koziol (1992)
c Methionine + cysteine
d Phenylalanine + tyrosine

Regarding quinoa's protein availability, Ruales and Nair (1993) examined the difference between raw and washed quinoa to determine the effect of removing quinoa's saponins, and found that the essential amino acid contents were similar. They also tested the availability of quinoa's protein in an animal feeding experiment. Ruales and Nair (1992) noted that quinoa (80.8 washed) had a higher biological value of its protein compared to foods such as maize (58.1), soy bean (62.0) and wheat (59.0). This led them to conclude that quinoa could be used as a supplementary ingredient to increase the biological value of certain foods.

Carbohydrates

Quinoa is a good source of carbohydrates, providing approximately 68.8 to 75.8 grams of total carbohydrates per 100 grams dry weight (Repo-Carrasco-Valencia and Serna, 2011). In terms of macronutrients, carbohydrates contribute the most energy to the basic diet and are considered a key factor in energy metabolism and homeostasis within the body (Mann et al, 2007). In a study of four quinoa varieties, Repo-Carrasco-Valencia and Serna (2011) found quinoa's fibre content to range from 13.6 to 16.0 grams per 100 grams dry weight, with the majority coming from insoluble fibre (12.0 to 14.4 grams).

Lipids

Miranda et al (2012) found quinoa's lipid content to range from 5.9 to 7.2 percent of its dry weight among six quinoa ecotypes. In contrast, beans (1.1 g), maize (4.7 g), rice (2.2 g) and wheat (2.3 g) all contained lower amounts of lipids than quinoa as shown in Table 1 (Koziol, 1992).

Regarding quinoa's fatty acid content, quinoa is high in polyunsaturated fats, with about 50 percent of its lipids coming from linoleic acid, an essential fatty acid, which is an amount higher than in olive or peanut, but comparable to that of soy as shown in Table 3 (Koziol, 1992). The integrity of quinoa's unsaturated fatty acids benefits from its naturally high vitamin E content, which acts as an antioxidant to maintain quinoa's lipid stability (Abugoch James, 2009).

***Table 3*: Fatty acid content of quinoa and selected foods as a percentage of total fat**

	Quinoa	Soy	Peanut	Olive
Myristic (C14:0)	0.2	NR	NR	NR
Palmitic (C16:0)	9.9	9.4	9.3	9.6
Stearic (C18:0)	0.8	4.4	2.0	2.8
Palmitoleic (C16:1)	0.1	NR	NR	NR
[illegible]	24.5	21.6	44.7	[illegible]
Linoleic (C18:2)	50.2	55.2	33.8	[illegible]
Linolenic (C18:3)	5.4	9.0	NR	0.6

Source: *Koziol (1992)*

Minerals and vitamins

On average quinoa is a better source of minerals than most grains as shown in Table 4. Quinoa's higher mineral content is especially important for people who consume limited amounts of animal foods, which are a primary source of many important minerals such as calcium, iron and zinc (Repo-Carrasco-Valencia et al, 2010).

Quinoa is also a good source of B vitamins riboflavin and folate compared to other grains, and comparable in amounts of thiamine, but substantially lower in niacin on average (Koziol, 1992; Ruales and Nair, 1993).

As was mentioned in the introduction, the saponins in the pericarp of quinoa have to be removed to eliminate their bitter taste, which affects the mineral content of quinoa after processing. Ruales and Nair (1993) and INIAP (1987) reported potassium losses of 46 and 47 percent, and iron losses of 28 and 52 percent, respectively, after processing, while Koziol (1992) estimated losses of 12 to 15 percent for calcium, phosphorus, iron, potassium, sodium, and zinc. In general, the availability of minerals from all plant foods is poor when compared to animal foods because of the presence of food constituents such as dietary fibre, phytate and oxalate (Schlick and Bubenheim, 1996).

***Table 4*: Mineral content of quinoa and selected foods, mg/100g dry weight**

	Quinoa	Maize	Rice	Wheat
Iron	13.2	2.1	0.7	3.8
Phosphorus	383.7	292.6	137.8	467.7
Zinc	4.4	2.9	0.6	4.7

Source: *Koziol (1992)*

Summary

Quinoa is considered a nutritious food, based on being a good source of several nutrients. It has a well-balanced mix of essential amino acids compared to most grains and legumes, making it a good source of plant protein. Additionally, quinoa is an important source of polyunsaturated fats, dietary fibre, and minerals such as iron, magnesium and zinc. While quinoa contains important amounts of certain nutrients, it is important to eat it as part of a well-balanced diet to obtain all of the nutrients needed for good health.

References

Abugoch James, L.E. (2009) Quinoa (Chenopodium quinoa Willd.). Advances in Food and Nutrition Research. 58.

FAO. (2013) Dietary protein quality evaluation in human nutrition: Report of an expert consultation. FAO Food and Nutrition Paper No. 92. Rome: FAO.

INIAP. (1986) Historia de las dos Primeras Variedades de Quinua. Unidad de Recursos Fitogenéticos, Estación Experimental "Santa Catalina," Instituto Nacional de Investigaciones Agropecuarios, Quito, Ecuador.

Koyro H.W. y Eisa, S.S. (2008) Effect of salinity on composition, viability and germination of seeds of Chenopodium quinoa Willd. Plant Soil. 302, 79-90.

Koziol, M.J. (1992) Chemical composition and nutritional evaluation of quinoa (Chenopodium quinoa Willd.). Journal of Food Composition and Analysis. 5, 35-68.

Mann, J., Cummings, J.H., Englyst, H.N., Key, T., Liu, S., Riccardi, G., Summerbell, C., Uauy, R., van Dam, R.M., Venn, B., Vorster, H.H., Wiseman, M. FAO/WHO Scientific Update on carbohydrates in human nutrition: conclusions. European Journal of Clinical Nutrition, December 2007, 61(SUPPL. 1):S132-S137.

Mastebroek, H.D., Limburg, H., Gilles, T. y Marvin, H. (2000) Occurrence of saponins in leaves and seeds of quinoa (Chenopodium quinoa Willd.). J Sci Food Agric. 80, 152-156.

Miranda, M., Vega-Gálvez, A., Quispe-Fuentes, I., Rodríguez, M.J., Maureira, H. y Martínez, E.A. (2012) Nutritional aspects of six quinoa (Chenopodium quinoa Willd.) ecotypes from three geographical areas of Chile. Chilean Journal of Agricultural Research. 72(2), 175-181.

National Research Council. (1989) Lost Crops of the Incas: little known plants of the Andes with promise for world-wide cultivation. Washington, DC: National Academy Press.

Prego, I., Maldonado, S. y Otegui, M. (1998) Seed structure and localization of reserves in Chenopodium quinoa. Annals of Botany. 82, 481-488.

Repo-Carrasco-Valencia, R., Encina, C.R., Binaghi, M.J., Greco, C.B. y Ronayne de Ferrer, P.A. (2010) Effects of roasting and boiling of quinoa, kiwicha and kañiwa on composition and availability of minerals in vitro." J Sci Food Agric. 90, 2068-2073.

Repo-Carrasco-Valencia, R. y Serna L.A. (2011) Quinoa (Chenopodium quinua, Willd.) as a source of dietary fiber and other functional components." Ciencia y Tecnologia de Alimentos. 19 (1), 225-230.

Ruales, J. y Nair, B.M. (1993) Content of fat, vitamins and minerals in quinoa (Chenopodium quinoa, Willd.) seeds." Food Chemistry. 48, 131-136.

Ruales, J. y Nair, B.M. (1992) Nutritional quality of the protein in quinoa (Chenopodium quinoa, Willd.) seeds. Plant Foods for Human Nutrition. 42, 1-11.

Schlick, G. y Bubenheim, D.L. (1996) Quinoa: Candidate crop for NASA's Controlled Ecological Life Support Systems. p. 632-640. In: J. Janick (ed.), Progress in new crops. Arlington, VA: ASHS Press.

ISBN 978-92-5-108057-3

I3525E/1/02.14